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# BETTER FRUIT

VOLUME IX

APRIL, 1915

NUMBER 10

THIS EDITION contains interesting personal sketches of each member of the Executive Committee and Board of Control, with illustrations of each and other interesting information about the fruit growers, plan for controlling the marketing agencies operating in the four Northwestern States—Oregon, Washington, Idaho and Montana—with the usual number of timely articles on spraying, advertising, intercropping and other subjects for bettering the condition of the fruit grower.

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THE EXECUTIVE COMMITTEE OF THE FRUIT GROWERS' COUNCIL FOR CONTROLLING THE MARKETING CONCERNS IN THE FOUR NORTHWESTERN STATES, OREGON, WASHINGTON, IDAHO AND MONTANA.

W. H. Paulhamus, Puyallup, Washington, President and Manager, the big man who has tackled a big job, and his assistants: On the left, C. T. Haskell, fruit grower and secretary High Line Irrigation Company, Wenatchee, Washington. On the right, Truman Butler, banker, Hood River.



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# BETTER FRUIT

AN ILLUSTRATED MAGAZINE PUBLISHED MONTHLY IN THE INTEREST OF MODERN, PROGRESSIVE FRUIT GROWING AND MARKETING

## Members of Executive Committee and Board of Control

**MR. JOHN A. WESTERLUND**, Medford, Oregon, Member of the Board of Control of Ten, Representing the Southern Oregon District in the Fruit Growers' Council of 107.

John A. Westerlund of Medford, Oregon, was born in Henry County, Illinois, June 10, 1865, on the farm of his father, Peter Westerlund, one of the early settlers of Henry County and today one of the leading bankers and farmers of that vicinity. Mr. Westerlund is 49 years of age.

Mr. Westerlund received his early training on the farm of his father, where he remained until he was twenty-two years of age. He attended high school at Orion, Illinois, and being desirous of a higher education he entered Bethany College at Lindsborg, Kansas, where he attended for six years, graduating in the year 1891 in the classical and scientific courses with the degree of A. B., and was a member of the first class graduated from this institution. In the same year Mr. Westerlund moved to Chicago, where he engaged in the real estate, insurance and colonization business, identifying himself with the immigration and colonization business, especially along the lines of the Union Pacific and Southern Pacific Railroads. He has been closely identified with agricultural and horticultural pursuits for the past twenty years. In 1902 and 1903 he was operating extensively as special traveling immigration agent for the Union Pacific and Southern Pacific Railroads, during which years over four thousand home-seekers were brought to Oregon, Washington and Idaho by Mr. Westerlund. As an appreciation of his splendid work in bringing settlers to the West, Governor Chamberlain of Oregon appointed him State Commissioner of Immigration.

Ten years ago Mr. Westerlund became extensively interested in fruit growing near Medford, Oregon, where he now resides, and proceeded by co-operation to develop over one thousand acres in one single block into one enormous fruit orchard of apples, pears, peaches, apricots and other fruits. Success was met with from the start and Mr. Westerlund is today at the head of two of the leading fruit-growing concerns in the Rogue River Valley—the Monitor and Medford Orchard Companies, known commercially as the Westerlund Orchards. These orchards promise to become excellent producers and have their own packing and shipping warehouses on the line of the Southern Pacific Railroad, where the fruit from the orchards is brought down, the orchards being located from two to

four miles from the growing City of Medford.

Mr. Westerlund has twice been honored by the people of his county, having been elected a member of the Legislature in 1911 and 1913. Here he devoted much time and energy and was successful in securing better horticultural laws for the fruitgrowers of the State of Oregon.

Mr. Westerlund, while not a frequent talker, before the convention at Tacoma was regarded as a successful business man, having accomplished achievements that are worthy of credit. His

ward going to Billings, Montana, from which high school he graduated in 1905. He took a two years' course in civil engineering at the Washington State College, Pullman, Washington, from 1906 to 1908. Since that time he has been variously located in Billings, Montana, and in the Wenatchee and Okanogan Valleys, engaged in engineering construction work along canals, mines, etc.

Mr. Chase has two bearing orchards in the Okanogan Valley and at the present time is engineer and superintendent of a company which owns and irrigates about 1600 acres of orchard near Brewster, Washington. He is also secretary and member of the board of directors of the Brewster District Unit of the Wenatchee-North Central Washington Growers' League, and secretary and member of the board of control of the Wenatchee-North Central Washington Growers' League.

Most of Mr. Chase's professional experience has been connected with orchards in which the following account furnishes quite a complete record:

Construction work, Wenatchee Canal Co., Wenatchee, Washington; construction work in mines, Federal Mining Co., Mullan, Idaho; engineer in charge for two years of the Wenatchee Canal Co., East Wenatchee Land Co. and Icicle Canal Co., Wenatchee Washington. During the last-mentioned period of two years he had active charge of the construction of five tunnels, ranging from 700 to 3500 feet in length, being 7 and 8 feet wide on the bottom and 7 feet in height; three continuous wood stave pipe siphons 66 and 72 inches in diameter and from 500 to 700 feet in length, across canyons which had formerly been crossed by high trestles; the rebuilding of several flumes, totaling over two miles in length, which were from 6 to 8 feet wide, 5 feet high; the surveying and platting of lands for the East Wenatchee Land Co.; the survey of the Icicle Canal Co.'s canal, which is over 30 miles in length. This was partially constructed under Mr. Chase's supervision and charge, the canal being mostly flumes and dirt ditch with three long siphons, one crossing the Wenatchee River.

In his present capacity as superintendent and engineer for the Okanogan Power & Irrigation Co., Mr. Chase has had the laying out and supervision of construction of several large pumping plants for different orchard companies near Brewster and Bridgeport, Washington.

Mr. Chase is a member of the Pacific Northwest Society of Engineers.

## Features of this Issue

EXECUTIVE COMMITTEE AND THE BOARD OF CONTROL, FRUIT GROWERS' COUNCIL OF 107

SPRAYING ECONOMY AND INSECTICIDE EFFICIENCY IMPORTANT

BLACK LEAF "40" SPRAYING TO CONTROL APPLE APHIS

THE TRUTH WELL TOLD—WILL HELP SOLVE THE APPLE MARKET PROBLEM

ORGANIZATION OF CENTRAL SELLING AGENCY

APPEAL FOR CO-OPERATION

ability as a manager is shown by the large orchard of which he is the manager in Southern Oregon.

As Southern Oregon sent but one delegate to Tacoma and as Mr. Westerlund was the delegate selected, it seems reasonable to assume that he has a standing in his own community that is worth having, and which is further indicated by the fact that he was chosen representative to the State Legislature, having received a large vote. It is believed that Mr. Westerlund will render services to the fruitgrowers of the Northwest in his new position which will be of great value, because he has had a large experience in dealing with big propositions.

\* \* \*

**MR. C. E. CHASE**, Brewster, Washington, Member of the Board of Control of Ten, Representing Wenatchee District in the Fruit Growers' Council of 107.

Mr. Chase was born at Amboy, Nebraska, March 24, 1886, and is nearly twenty-nine years of age. He came to the Yakima Valley in 1892, where he attended the public schools, including the North Yakima High School, after-



THE BOARD OF CONTROL

*Top row, left to right:* E. C. S. Brainard, Payette, Idaho; A. D. Moe, Hood River, Oregon; A. W. Simmons, Freewater, Oregon; W. M. Sackett, Hamilton, Montana; J. A. Westerlund, Medford, Oregon; Harry Jones, Wapato, Washington. *Front row, extreme left:* John F. Davis, Spokane, Washington. *Extreme right:* E. C. Chase, Brewster, Washington. *Front row (Executive Committee), second from left:* C. T. Haskell, Wenatchee, Washington; W. H. Paulhamus, President and Manager, Puyallup, Washington; Truman Butler, Hood River, Oregon.

Mr. Chasc, while still a young man, has made a record for himself that any man can justly feel proud of. Those who met him at the Tacoma convention felt very much impressed with his sincerity and ability and feel, without exception, that he will render valuable services in his position on the board of control.

While not so well acquainted with the fruitgrowers at large as the other members of the board, he has an intimate acquaintance with the fruitgrowers of his own district, who showed their confidence in his ability and judgment by placing him as the representative of the Wenatchee district on the Board of Control of Ten.

\* \* \*

**MR. A. W. SIMMONS, Freewater, Oregon, Member of the Board of Control of Ten, Representing Walla Walla District in the Fruit Growers' Council of 107.**

Mr. A. W. Simmons was born in Cass County, Nebraska, February 1, 1856, and is now 59 years of age. He attended the public schools in Nebraska and afterward the State University of Nebraska.

During his early life he was a school teacher, afterward going into the mercantile business, and still later on engaging for twenty years in the drug business in Dorchester, Nebraska. In

the latter place he was for eighteen years a member of the Board of Education, and for a number of years was mayor of that city.

In 1906 Mr. Simmons retired from the drug business and moved to Walla Walla, where he located on a well-improved tract of ten acres set to fruit, which is situated on the interurban car line between Walla Walla, Washington, and Milton, Oregon. In 1910 he received first prize for the best ten boxes of Arkansas Black at the National Apple Show at Spokane, and at this show he also had twenty-seven boxes of apples on exhibit in the Walla Walla Valley district display which also won first prize.

For two years Mr. Simmons was vice-president of the Milton Fruit Growers' Association and is now secretary and treasurer of the State Line Irrigation Co. For three years he was chairman of the Fruitvale School Board.

Mr. Simmons, while not a frequent speaker on the floor, is generally regarded by the fruitgrowers who know him as a man of good ability; a man who will do more thinking than talking; a man who at all times will entertain good, sound, sensible ideas for the benefit of the industry; a man who will render efficient service in his new position which he has assumed.

**MR. E. C. S. BRAINARD, Payette, Idaho, Member of the Board of Control of Ten, Representing Idaho District in the Fruit Growers' Council of 107.**

Mr. Brainard was born at Onargie, Illinois, October 13, 1863, and is now 51 years of age. His boyhood days were spent in various towns in Iowa, principally at Cedar Rapids, where he attended the public schools, taking up telegraphy under the direction of his older brother. At the age of eleven, it is stated, he became a good operator, being among the first telegraphers who could read by sound; most of the work at that time, particularly in the West and Middle West, being done by the old paper machines. At sixteen years of age he was station agent at Clarksville, Iowa, a town of about 2500 inhabitants. Since that time he has filled numerous positions with the railroads in the Middle West and Northern States in the station department and operating department. His last position in that line of work was chief clerk for the Rio Grande Railroad at Ogden, Utah, which position he resigned in 1902 to engage in dairying and fruit growing.

In 1904 Mr. Brainard moved to the Payette Valley and since that time has been connected with various irrigation projects, land development and promotion projects, at one time being overseer of seven ranches of forty acres

each, located between Payette and New Plymouth, Idaho.

At the present time Mr. Brainard is the owner of and gives his time and attention to the active management of 200 acres of standard varieties of apples, mostly Jonathans, Rome Beauties, Winesaps and Arkansas Blacks. This orchard is situated near Payette, Idaho.

Mr. Brainard occupies the following positions: Manager of the Fruitland Townsite Co. properties and various ranches; director and member of the loan committee of the First National Bank of Payette, Idaho; secretary of the Payette Valley Commercial Club of Payette; secretary of the Idaho Land & Improvement Co. and various other corporations; for eight years president of the Conference Board of Home Missions and Church Extension, Idaho Conference, Methodist Episcopal Church, and trustee of Gooding College of Gooding, Idaho, a Methodist educational institution which is now well under way and will probably open for students in September, 1915.

Mr. Brainard is what is called a "self-made man," having obtained his education in the school of experience and hard knocks.

Mr. Brainard was one of the active spirits at the Tacoma convention, having addressed that body on many occasions in a clear, forceful way which impressed the audience with the idea that he is a good, clear thinker and a sound reasoner. His success as a business man in his different lines of endeavor, and the positions he has held and holds are evidence of the esteem in which he is held in the communities where he has lived. Therefore it is safe to say that he will render valuable services as a member of the Board of Control.

\* \* \*

**MR. W. M. SACKETT, Corvallis, Montana, Member of the Board of Control of Ten, Representing the Montana District in the Growers' Council of 107.**

Mr. Sackett was born at Meadville, Pennsylvania, August 21, 1869, and is now 45 years of age. After attending the public schools at Meadville he attended Allegheny College, Meadville, Pennsylvania, from which college he graduated in 1888 with the degree of civil engineer. Mr. Sackett followed his profession, being employed by the United States War Department until 1890. After retiring from this service he entered the Massachusetts Institute of Technology as a junior and graduated as an electrical engineer with the class of 1892. After graduation he took a position in the construction department of the World's Fair at Chicago during the building of that exposition, afterward associating himself with the engineering department of the Chicago Telephone Company.

In 1909 Mr. Sackett engaged in orcharding in the Bitter Root Valley, and since that time has devoted all of his attention to the orchard industry. He owns forty acres of orchard and has

taken active part and shows much interest in the co-operation of fruitgrowers. During the last few years Mr. Sackett has been actively engaged in constructive work along co-operative lines for the fruitgrowers, being one of the trustees of the North Pacific Fruit Distributors as well as one of the organizers of that association. He has been largely interested in organizing the fruitgrowers in the Bitter Root Valley and at the present time is secretary of the Hamilton Fruit Growers' Association, a position without salary.

Mr. Sackett has shown wonderful activity in co-operative work and has been an earnest supporter of every endeavor along this line in the Northwest, having been active in organization work in Montana, in the formation of the Distributors and also in the splendid work which has been done by the by-product committee, of which he is a member. He was one of the active workers in the Tacoma convention and commanded the confidence and esteem of those who were present for his earnestness and ability.

\* \* \*

**MR. JOHN F. DAVIES, Opportunity, Washington, Member of the Board of Control of Ten, Representing the Spokane District in the Fruit Growers' Council of 107.**

Mr. Davies is a fruitgrower and interested in the orchard industry of the Northwest, therefore considering the fruitgrowers' problems as his own problems. By profession he is an attorney at law, having practiced that profession for some time. His practice during the last few years has been somewhat specialized, and by reason of his business connections he maintains offices in Butte, Montana, and Spokane, Washington, at 612 Columbia Building. In Spokane he is connected with the Interstate Utilities Company.

Mr. Davies' orchard and home is at Opportunity, Washington.

Mr. Davies is representative of the Spokane district on the Board of Control of Ten and chairman of that body.

Mr. Davies was one of the committee who drew up the Tacoma plan, and it may be said with sincerity and due credit that no man impressed the delegates at Tacoma more earnestly than Mr. Davies. He has a well-trained mind, is a clear reasoner and arrives at logical conclusions, presenting his ideas in clean-cut words so that they can be thoroughly understood by everyone who hears them. He is honored with the chairmanship of the Board of Control, which is a recognition of his force and ability.

\* \* \*

**MR. C. T. HASKELL, Wenatchee, Washington, Member of the Executive Committee of Three of the Fruit Growers' Council of 107.**

Mr. C. T. Haskell was born in Richland County, South Carolina, April 25, 1878, and is now 37 years of age.

In his early life, while a boy at the age of 13, from 1891 to 1899, he was employed in a bank, occupying different positions as he was advanced in the

work. During this time he was studying law and in 1899 completed a law course in the University of South Carolina. From 1899 to 1901 Mr. Haskell took a special course in law at the Harvard Law School, and for the next five years practiced law in South Carolina.

From 1905 to 1910 Mr. Haskell was engaged in civil engineering work, also in irrigation, railway and city work. In 1910 he came to Wenatchee Valley and engaged in fruit growing, being at the present time owner of sixteen acres of apple orchard near Wenatchee.

Mr. Haskell holds the position of chairman of the Board of Control of Wenatchee-North Central Washington Growers' League and is director and secretary of the Wenatchee Reclamation District, which is an irrigation district.

Mr. Haskell was one of the committee who drew up the articles of the Tacoma plan, and in the committee his views were in the minority, but be it said to his credit, which is a recognition of his good judgment, that his views in general were finally included in the plan by the vote of the convention. Mr. Haskell impressed himself upon all the fruitgrowers present as being a very able man, a very clear thinker, a man of good judgment and very conservative. His own district has such confidence in him that they considered him as one of the coming young men who will become great in his community.

\* \* \*

**MR. HARRY JONES, Wapato, Washington, Member of the Board of Control of Ten, Representing the Yakima District in the Fruit Growers' Council of 107.**

Mr. Harry Jones was born in Jackson County, Wisconsin, on January 28, 1852, and is now 63 years of age. His father was a farmer in Wisconsin, Mr. Jones helping his father on the farm during the summer and attending the country school during the winter.

In the fall of 1872 Mr. Jones came west, spending three years in the Mountain and Pacific Coast States, afterward returning to Wisconsin. During 1878 and 1879 he was under-sheriff of Saint Croix County, Wisconsin. In January, 1880, he entered the employ of the McCormick Harvesting Machine Co., remaining with it for several years, during which time he was manager of general agencies located at Ft. Dodge, Iowa, Sioux Falls, South Dakota, and Sedalia, Missouri. He resigned his position with this firm and became cashier of the First National Bank of Ft. Dodge, Iowa, in January, 1891, and the following year moved to Albert Lea, Minnesota, where he became the president of the First National Bank of Albert Lea.

In the fall of 1905 Mr. Jones moved to North Yakima and in the spring of 1906 located at Wapato, Washington, where, with Alex E. McCredy and others, he helped to organize the Wapato State Bank, of which he be-

Continued on page 39

# Spraying Economy and Insecticide Efficiency Important

By T. H. Parks, Field Entomologist University of Idaho, Moscow.

**B**Y the average commercial fruit-grower, insecticides and their application are understood to mean but a necessary unit of expense in his business, that is taken into consideration in computing the cost of producing the finished product. This is comparable to the operating expense needed in placing any finished product on the market by the manufacturer and which is figured in the selling price necessary to be secured to offset all such expenses which go to make up the cost. Since the fruit-grower is not yet able to control the market price of his finished product to cover all cost of production plus a compensation for his services and a reasonable profit, he must look the more toward lowering his cost of production by applying better business methods to his farm operations.

The time is past when the only aim is to increase the supply of fruit to shove upon an already glutted market, and the grower is beginning to look to the production of a superior quality of fruit at as small cost as possible in order to secure a reasonable interest on his capital invested. This means the application of business principles to the spraying as well as other production operations and reducing the expense of such spraying as much as possible without impairing their efficiency and usefulness. It does not mean that he need spray only once for codling moth where he has been spraying two or three times before, or spray for scale only every other year instead of yearly, but it must be remembered that cost of production includes also the costly result of hurried and careless work as well as the actual outlay of expense for labor and spray material, and it is this side of the production expense that presents the most room for improvement.

The fruit-grower cannot be blamed for grasping at information emanating from reliable sources and which promises to reduce the amount of work necessary to produce a crop. His aim is to simplify his spraying operations as much as possible without impairing their efficiency. He is especially apt to make fewer codling-moth sprays, and do the spraying less thoroughly during a year when the crop is light than when it is heavy, because he does not consider the crop worth so much. The result is usually that the years of wormiest fruit are years of light crop when the worms are forced to concentrate on the fruit that is present, and the grower often sees that he would have had a fair crop after all if he had given the attention to the spray that he had given in former years. This has been brought to my attention in a number of cases, and instead of economizing on his sprays he has actually been extravagant, failing to save the fruit that escapes the frost. The increased supply of codling-moth larvae

will make the battle all the more difficult next year. The degree of success in spraying for codling moth varies with the relative abundance of the insects in relation to the fruit crop. This relative abundance will increase directly as the supply of fruit decreases. Bearing in mind that reducing the cost of spraying also includes the prevention of loss from careless work, how else can the grower reduce the cost of his spray applications?

**C**o-operative Buying of Spray Material.—The first cost of the spray material is by no means the least, and co-operative buying, whenever it can be done, is to be recommended. In case of lime-sulphur, where time and facilities are at hand, it is often more economical to make this on the ranch. The individual grower will have to be the judge of the economy of this.

Do not use a stronger strength of spray than recommended. This is often done, especially with arsenate of lead used as a codling-moth spray. Many growers have the impression that doubling the amount of spray material called for by the directions will give better results. Consequently they use 5 pounds of arsenate of lead to 50 gallons of water instead of 2 or 2½ pounds, in the hope of getting better results and possibly with fewer operations. The less successful grower is liable to ascribe the worms to too weak a spray and next year he will double the strength in the hope of getting better results. This phase of the insecticide efficiency has been thoroughly investigated and excellent results have been secured with strengths of 1 pound of arsenate of lead to 50 gallons of water (one-fifth of the above strength), but only with very thorough applications. There is little necessity of the grower using over 2½ pounds of arsenate of lead to each 50 gallons of water, as experiments and practical demonstrations have shown this to be equally as efficient as stronger sprays and the possible danger of injury from arsenic residue about the roots of the tree is thereby much lessened.

**T**horoughness of Application.—More attention should be paid to thoroughness of application, especially of the first or "calyx" spray for the codling moth. This cannot be overemphasized, and it is here that the best results can be secured with a little extra attention, especially if it is done at the proper time. It should be remembered that the calyx cup well filled in May is a death-trap to larvae trying to enter that calyx in August and September. The work of thoroughness here includes also the use of a high-pressure power outfit, a tower on the top of the outfit to enable the operator to reach the topmost branches, and the use of a driving spray from angle nozzles and hose fitted with extension rods at least eight feet long. None of these can be omitted without affecting the thoroughness of the work,

and along with the outfit should go the owner of the orchard or the highest-paid man on the ranch. It is no exaggeration to say that 90 per cent of the men handling spray rods do not know how to spray a tree, and usually the highest-priced man on the place is the cheapest in the end. Poor spraying is more expensive than a thorough job, even though the time required may be double, provided the orchard is not too large to be covered by the outfit in the proper time.

**U**se of Combination Sprays.—Combination sprays have a place and are coming to be more and more used. By the combination of an insecticide and a fungicide spray, or a contact and arsenical spray, the cost of keeping the orchard clean is greatly reduced over the expense of separate applications. This is especially true with reference to the codling moth and the apple scab in North Idaho, and possibly will be used more frequently for the codling moth and apple mildew in South Idaho. The combination sprays which are designed to reach codling moth and green aphis are to be encouraged and can be used to good advantage, especially during the early applications of spray for the codling moth. This saves the expense of making a separate spray for the aphis and the only extra cost is the cost of materials. The following list contains most of the common sprays that can be safely used in combination for both insects and fungus diseases. Some of these combinations are already being used successfully in Southern Idaho, and the cost of separate applications thus reduced:

Arsenate of lead and Lime-sulphur (neutral)	(summer strength)
Tobacco and soap "Black Leaf 40"	Bordeaux mixture
Iron sulphide	Atomic sulphur
Arsenate of zinc and Iron sulphide	Lime
Lime-sulphur and "Black Leaf 40"	Arsenate of lead (neutral)
Kerosene emulsion and Sulphur (powdered, or lime-sulphur)	

In passing I may state that no combination spray used later in the season can take the place of the lime-sulphur spray applied early in the spring for San Jose scale, and the one recommending using arsenate of lead and lime-sulphur (summer strength) is recommended for its fungicidal value rather than its effectiveness against scale, though it would have some value against scales which have escaped the action of the dormant lime-sulphur spray. Every orchard is entitled to the annual "house cleaning" given by the application of lime-sulphur spray, preferably when the buds are swelling. A great deal has been said about the number of sprays, but I do not think that we can afford to economize here. Few successful growers feel that they can

Continued on page 37

## Black Leaf "40" Spraying to Control Apple Aphis

[From Bulletin No. 1, Published by The Kentucky Tobacco Product Company, Louisville, Ky.]

PLANT lice are among the most annoying and expensive pests of agricultural crops that the farmer must combat. And yet these small, soft-bodied insects are easily destroyed and effectively controlled. A few general facts, a few simple directions, and the matter of aphis control loses most of its uncertain and perplexing features and becomes a regular routine part of orchard management.

Throughout the growing season these plant lice in enormous numbers drain the vitality of the plants attacked, and if not checked often cause large losses to the grower. A single aphis may bring forth from 50 to as many as 150 young which, in little more than a week, are themselves ready to produce young. At the approach of cold weather the females (the woolly aphis excepted) lay eggs, in which form the plant lice pass the winter. The woolly aphis passes the winter in form of young lice on twigs, branches and trunk, and as young and old lice on the roots. With the hatching of the eggs in the spring at the time the buds begin to grow, the activity of the plant lice begins, and unless steps are taken in time the number of individuals may become so large as to threaten the life of the plant or destroy a large portion of the season's crop. Plant lice are particularly destructive in the spring, though severe outbreaks may occur at any time during the growing season.

The aphis generally prefers the

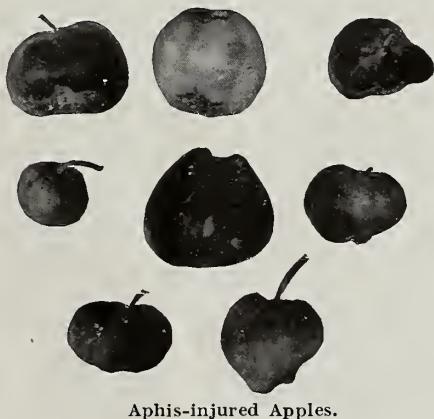
younger, growing twigs and is found most frequently in the denser parts of the tree. Its sharp, slender beak penetrates to the interior of the leaf, blossom, fruit or twig and by this means it sucks the plant juices which constitute its food. As the aphis obtains its food from within the plant, evidently, poisons, which must be swallowed to be effective, such as arsenate of lead, do not bother it in the least. An insecticide that will kill merely by touching the insect must be used.

The aphis causes the following types of injury: Reduces the vitality and checks the growth of the tree; causes leaves to curl, turn brown and drop; reduces the yield of fruit; causes fruit to be misshapen; checks the development of young fruit; causes the well-known "cluster apples"; checks the development of the next year's fruit buds; assists in spreading plant diseases, particularly fire blight; weakens or kills young nursery stock.

A grower with infested trees should spray not only to increase the yield and grade of his own fruit and protect the vitality and growth of his own trees, but also to afford reasonable protection to the trees of his neighbors. Aphids fly or are carried by the wind from one orchard to another. A grower may, then, by neglecting to spray, cause nearby orchards to be infested even though the neighboring growers have sprayed properly. In fact one neglected orchard may be the center of infestation for a whole community.



Showing why a contact spray must be used.



Aphis-injured Apples.

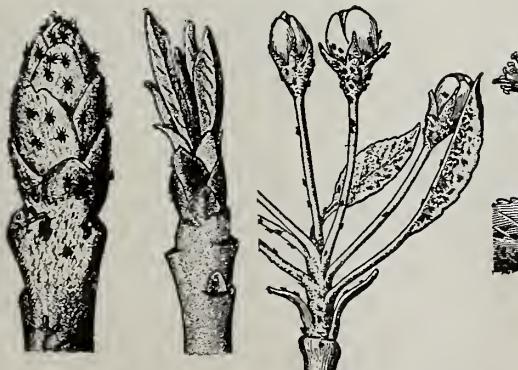


FIGURE 3. FIGURE 4. FIGURE 5.

FIGURE 3—Aphids on opening bud; period for spraying. FIGURE 4—Apple buds too far advanced for aphis spraying. FIGURE 5—Aphids in cluster of unopened blossoms; a good time for spraying.

[From the New York (Geneva) Experiment Station Circular 23]

The time of spraying is an important item in the control of aphis. Failures to control aphis may often be traced to the fact that the spray was not applied soon enough. The New York (Geneva) Experiment Station gives the following as the times when the green, also rosy or purple aphis are most vulnerable: "When the aphids are appearing on the green tips of the buds and when the leaves have unfolded but have not been curled by the lice, which is usually just before or immediately after blossoming. 1. Spraying for the newly-hatched lice: Especial pains should be taken to destroy the pest at this stage, as thorough work greatly reduces the subsequent numbers of the lice and may simplify later spraying operations. The best means of killing the newly-hatched lice is a treatment during a green and while the buds are still compact. (Figure 3.) It is important to spray early, for if the treatment is delayed the aphids obtain protection in the fuzzy, unfolded leaves of the opening buds, where they are protected from applications of spray mixtures. 2. Spraying for adults of the first brood and second-brood young: Individuals of these stages are very susceptible to contact sprays. They are usually active upon the trees during the period extending from the appearance of the color in the unopened blossoms (Figure 5) to the dropping of the petals (Figure 6)." \* \* \*

Make the applications as follows: Spray with "Black Leaf 40" 1 to 1066 and soap ( $\frac{3}{4}$  pint of "Black Leaf 40" plus 3 to 4 pounds soap to 100 gallons water) when the buds show green. (See Figure 3.) If lime-sulphur is applied for scale when buds shown green, combine "Black Leaf 40" with it instead of making application No. 1. Omit soap. (See Figure 3.) Combine "Black Leaf 40" with scab spray (when blossoms show pink) if treatments 1 or 2 were not given or lice are present. Omit soap. (See Figure 5.) Likewise combine "Black Leaf 40" with the first codling-moth spray (when petals fall) if plant lice are present. Omit soap. However, we strongly recommend treatments 1 or 2 or 3 for best results. (See Figure 6.) Thorough work in spraying at these times may make later applications unnecessary. There is no definite rule for spraying in late summer for aphis. The grower should keep watch and spray whenever the plant lice threaten to become numerous and before the leaves curl.

The formula: Circular No. 23 of the New York (Geneva) Experiment Station states: "The most satisfactory preparation from the standpoint of safety to the buds and effectiveness against the insects is three-fourths of a pint of 'Black Leaf 40' to one hundred gallons of water, to which are added from three to five pounds of dissolved soap." This gives a dilution of one part of "Black Leaf 40" to 1066 parts water. The soap is added as a spreader and in addition serves to soften hard water, which occasionally renders

Continued on page 34

# The Truth Well Told—Will Help Solve Apple Problem

By Harrison Atwood, Vice President The H. K. McCann Company, San Francisco.

**A**N apple a day. Just suppose for a minute that the American people—every one of them—were eating an apple a day. One hundred million people, 365 days—that's thirty-six and a half billion apples—roughly twice the present apple production of the entire country. Add to this the "bulk consumption" of apples for pies, sauce and so forth, and there wouldn't be much worry about overproduction. Of course it is not likely that all the American people are going to take to apple eating over night. But suppose that half of them ate an apple a day—or even half of them ate half an apple a day. That is not an impossibility. Nearly the whole American nation eats some sort of breakfast food every morning. Advertising taught them to. Hundreds of thousands of men now use a safety razor every morning. Advertising taught them to.

Advertising will teach the nation to eat more apples—apples from the Pacific Northwest—and thus solve one of the greatest problems confronting the industry. The centralizing and harmonizing of the work of the Northwest selling agencies, now going on, is of vital importance. So, too, is the plan for developing the by-products end of the business, and the plans for more adequate cold-storage facilities and for the securing of better freight rates to the East, both by rail and water. These things are fundamental. They provide the essential machinery for marketing the Northwest apple. But they do not provide the market.

The market is the people, or, more exactly, it is that portion of the people who want your apples. They cannot want them until they know them, and unfortunately the people as a whole do not know the Northwest apple. Of course thousands do know it—and favorably. They will eat no others. But these thousands are not enough to insure a sufficient market now—certainly not for the future. To market your fruit with the greatest success you need to tell more people about it. You need to teach them, you need to advertise to them. Advertising is nothing more than the "Truth Well Told." It is going to the people and telling them the facts about your apples. And you can be certain people are going to buy more Northwest apples when they really know them.

There are scores of thousands of people in this country who are eating "just apples"—often small, hard, misshapen fruit grown on some neglected tree. Scores of thousands are eating what you would call "cooking apples," or even poorer. Suppose you were to tell these people the story of the Northwest apple—tell them how carefully the hole is dug or dynamited and the tree set out, tell them how the young tree is nursed along to maturity, how the soil is cultivated, how the trees are sprayed, how the ripe fruit is carefully picked by hand, sorted and each apple

wrapped separately in tissue before it is packed in the substantial box that brings the fruit to them, solid and round and perfect. Make them realize that apple growing in the Northwest is a science, that here as nowhere else the apple is brought to its highest perfection. Tell them of the healthfulness of the apple, how it aids digestion and helps regulate the system; tell them of its great food value as shown in the government bulletin—making it plain always that you are talking about the Northwest apple.

But do not stop with these mere facts. Appeal to their taste. Make their mouths water for the crispness of a perfect Delicious or Newtown. It can be done even in type and pictures. Then go on and tell them of all the appetizing ways in which the apple can be used. Give them a recipe for a new apple salad, for example. Suggest that the housewife send for a complete booklet of selected apple recipes. You can well afford to give her one. Keep reminding them, these potential apple eaters in the East, of all the occasions when an apple is so good—for the whole family at breakfast, for father working late at the office, for the children at recess or after school, for the picnic lunch basket. A properly conducted advertising campaign will create a constantly increasing good-will asset for the Northwest apple industry that eventually will be worth millions of dollars.

Advertising will increase the consumption of Northwest apples and more nearly adjust the demand to the supply. Will create a demand throughout the year and thus stabilize the market. Will reduce the selling expense because the selling effort will be less. It is easy to sell goods for which there is an insistent demand. Will make it easier to get credit, for a banker will readily loan money on a branded food product for which there is a steady call. Will have the indirect result of advertising the Northwest States themselves, and increasing the value of apple-bearing properties.

It is just as certain that advertising will do these things for Northwest apples as that it has done them for breakfast foods and oranges. Take the case of the California orange growers. In many ways their situation was similar to yours—they had a beautiful fruit with constantly-increasing output, but a nearly stationary demand. They turned to advertising, and in the last decade, while the population of the United States has increased 21 per cent, the per capita consumption of California oranges has increased 75 per cent. In his last annual report the general manager of the California Fruit Growers' Exchange writes: "The production of California oranges and lemons is increasing rapidly and the Exchange, looking to the future as well as to the present interests of its members, is by judicious advertising creating a larger

consumption of oranges, lemons and grapefruit. At the same time it has established for the "Sunkist" brand a national standard of quality that is a cash asset for every Exchange shipper. The advertised brands of the Exchange are now demanded by consumers everywhere." And all this has been done for the orange growers at a very moderate cost. This last year it was one and one-half cents per box, or only six-tenths of one per cent on the gross value of the fruit.

The proposed Council of the Northwest Fruit Growers, working in co-operation with the several selling agencies, is the organization through which this apple advertising can be carried on. This central body can conduct a comprehensive campaign of apple education such as no single selling agency or single growing district could afford to undertake. All will be benefited. None will be heavily taxed. A cent a box will provide an advertising fund that will make the American people know the Northwest apple. This fund can provide not only for educating the consumer, but for telling the trade what you are doing and for enlisting their co-operation. Advertising will make Apple Day a much bigger national affair—a day on which everyone will think apples, talk apples, eat apples and get the desire to do so for many months to follow.

If advertising were to cost five cents a box it would still be worth while. But a cent a box will do it—and that is a safe, conservative expenditure. Properly, it is not an advertising expense alone. Advertising has come to be considered as one of the regular items of selling expense. It is so counted by thousands of the most reliable and prosperous business firms in the country. The general manager of the California Fruit Growers' Exchange refers to it as "partly an operating cost and partly an investment for the sale of future crops." You have no reason to doubt the future prosperity of the Northwest apple industry. You have one of the finest fruit products in the world, already favorably known to many people. You are intelligently applying yourselves to the problem of marketing that product without waste effort and waste expense. You need go only one step further. You need only to tell more people about your product, to teach them its goodness, and thus open up new and greater markets and secure for the Northwest apple the good will, which next to its quality is the greatest asset it can have. You can do this by advertising—which is merely the "Truth Well Told."

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The Washington Agriculturist is one of the most attractive and valuable publications coming to this office from any of the agricultural colleges. The Washington Agriculturist is published by the Washington Agricultural College, Pullman.

# Old-time jimmy-pipers rally round the P. A. standard!

*Col. J. S. Powell of Pensacola, Fla., 95 years old, and nephew of William Henry Harrison, the ninth President of the United States, has just been elected to the "old-time jimmy-pipers" club. Col. Powell has smoked for 85 years, breaking into harness as a ten-year-old. We will be glad to receive pictures of old-time smokers.*

## Now, everybody sit around close:

Any farmer along the friendly road will tell you never to judge the depth of a well from the length of its pump-handle. Just like it's back-shuffling cards to choose your tobacco from *the looks of the package*.

Pick P. A. for pipe joy and cigarette makin's joy, and you'll be just as happy as a June bug in an apple tree. For it's mighty widespread news nowadays that Prince Albert is made by a patented process that *takes the teeth out of the smoke* and leaves your tongue as calm and peaceful as a harvest moon night. That's *jimmy-pipe joy* that comes via

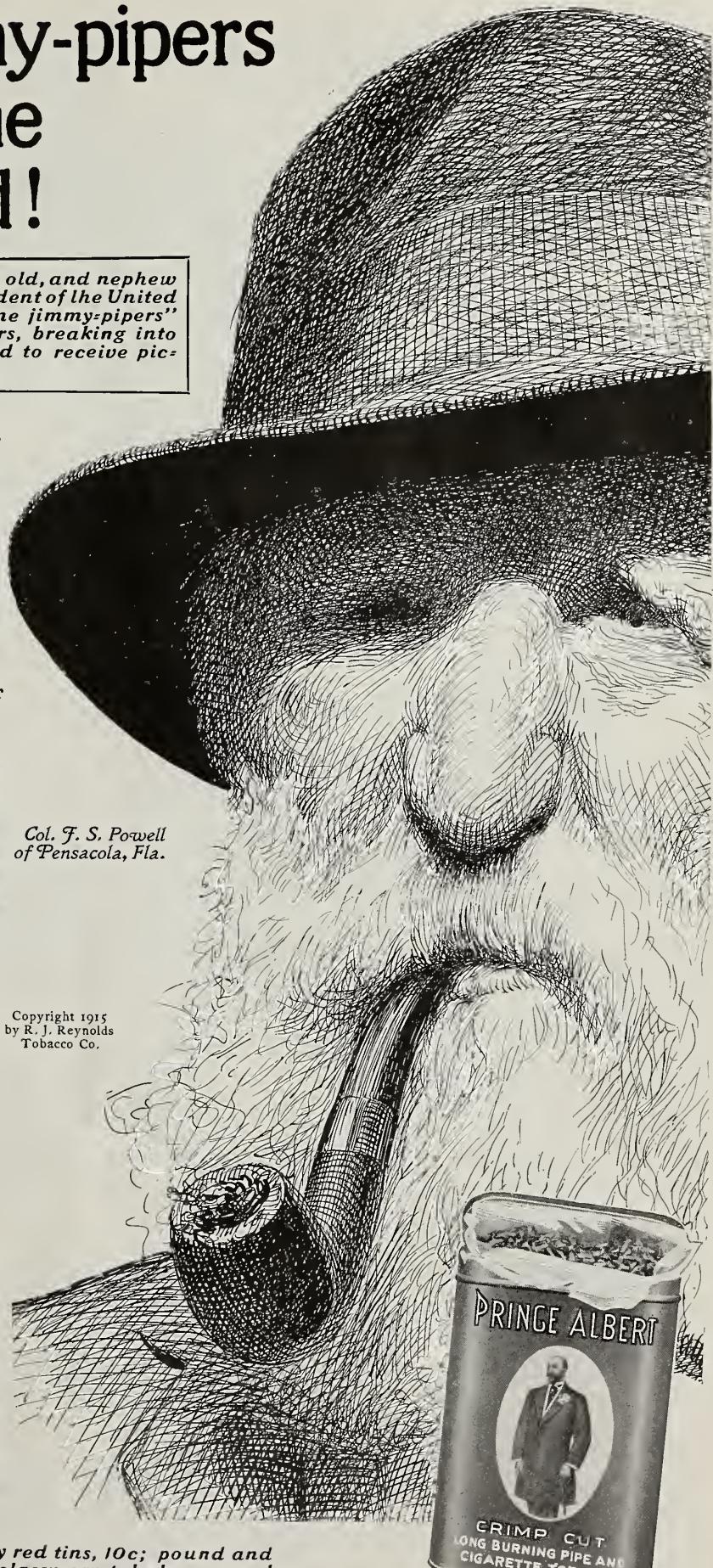
# PRINCE ALBERT

*the national joy smoke*

While the spring's young, tune up that old jimmy-pipe and bud-out into a real and true pipe smoker. Sure enough, you'll be in full bloom before the day is done, if you'll smoke P. A. For there's no more teeth in it than in a mocking bird's tune box. *And let that drift into your system.*

*Buy P. A. in toppy red bags, 5c; tidy red tins, 10c; pound and half-pound tin humidors—and that classy crystal-glass pound humidor with the sponge in the top that keeps P. A. so good.*

WHEN WRITING ADVERTISERS MENTION BETTER FRUIT



*Col. J. S. Powell  
of Pensacola, Fla.*

Copyright 1915  
by R. J. Reynolds  
Tobacco Co.

R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N.C.



**"LOOK FOR THE NAME"**

**ON SPRAY PUMPS**

For Spraying, Painting and Disinfecting.

If you grow fruit or vegetables, raise poultry or care for stock, you can't get along without a spray pump. You might just as well have a good one as any other kind. Get a MYERS—Bucket, Barrel or Power—according to your needs—a guaranteed pump that you can depend on or a fully equipped outfit with tank, trucks, etc., that is handy to use about buildings for whitewashing or disinfecting, and also adapted for spraying trees, shrubbery, etc.

Write today for late Catalog showing all styles of Myers Spray Pumps, Nozzles and Accessories and giving complete spray Calendar and Instructions—How and When to Spray. A Postal brings the catalog with name of our dealer.

**F. E. MYERS & BRO. 120 Orange St. ASHLAND, OHIO**  
ASHLAND PUMP AND HAY TOOL WORKS

M  
Y  
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V



**SPRAY MATERIALS**

Distributing warehouses in principal fruit growing sections of the Northwest for—

**Arsenate of Lead, Paste and Powder**  
**Atomic Sulphur**  
**Lime Sulphur Solution**  
**Bordeaux Mixture**  
**Oil Emulsions, Soluble Oil and Soaps**

In dealing with this Company fruit growers obtain the advantage of **quick delivery, fresh materials, minimum freight rates, prompt service, uniform prices** and **definite directions for the intelligent use** of these materials in order to obtain the best possible results. Bulletins giving the best available information for efficient and economical control of insect and fungous troubles will be mailed free on request.

**GENERAL CHEMICAL COMPANY**  
 Royal Insurance Building SAN FRANCISCO, CAL.

## Organization of Central Selling Agency Is Made

[From the North Yakima (Washington) Republic]

LAST NIGHT W. M. Nelson, acting for the Yakima County Horticultural Union; H. M. Gilbert, for the Richey & Gilbert Co., and C. E. Sanderson, for the Yakima Fruit Growers' Exchange, entered into articles of incorporation of the "Yakima Fruit Sellers," which is the name chosen for the central Yakima selling agency, for the organization of which a movement has been in progress for several weeks. Articles of incorporation were drawn and signed at a meeting of representatives of the three organizations in the office of Logan H. Roberts, and a copy of the articles were forwarded to the secretary at Olympia.

This action was taken following indorsement of the central selling agency plan by a meeting of the Horticultural Union in the afternoon in the Y. M. C. A. Building. The indorsement was

given by a vote which was almost unanimous, and the trustees of the union were authorized to join with the Yakima Fruit Growers' Exchange and the Richey & Gilbert Co. in incorporating the proposed agency.

The purpose of the Yakima Fruit Sellers are stated in the articles as follows: "First. To provide a central agency for the purpose of handling and selling fruits, agricultural and horticultural products for the persons, associations and corporations with whom it may see fit to enter into contract for this purpose, and to find a market for and sell said products. To reduce the cost of selling Yakima Valley products and procure better distribution, prevent overloading markets and to better advertise Yakima Valley products. Second. To provide a selling and handling

association in which persons with whom this agency may contract shall have a voice in the methods used in the sale of all products sold or handled by this corporation. Third. To do any and all acts necessary to promote the sale or distribution of Yakima Valley fruits and produce for the benefit of any and all persons, associations and companies with whom this company may contract."

The corporation is of a non-profit-sharing character, and the capital stock was fixed at the nominal sum of \$3,000, divided into thirty shares. Each of the organizations, through its representative, takes ten shares. The period of incorporation is fifty years, and the principal office and place of business are located in North Yakima.

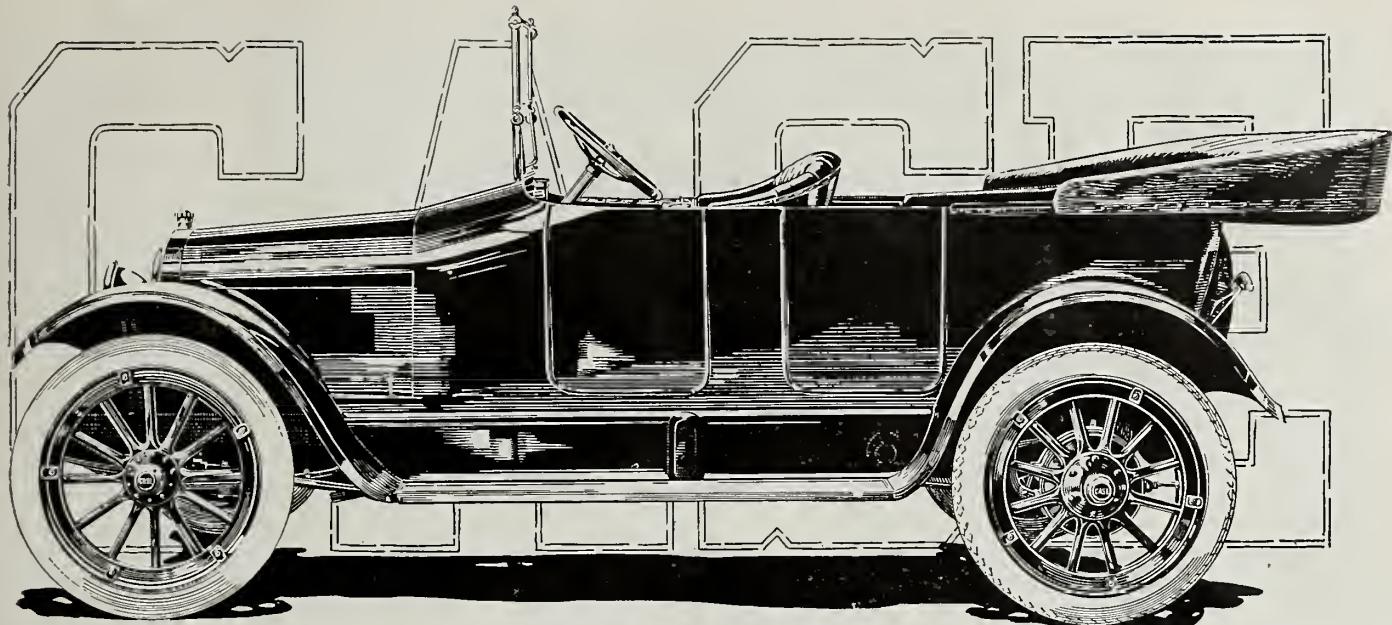
The affairs of the corporation are to be managed by a board of three trustees, but at any annual meeting of the stockholders, and at any special meeting called for the purpose, the number of trustees may be increased to a number not exceeding nine. W. M. Nelson, H. M. Gilbert and C. E. Sanderson are named as trustees until May 1, 1915.

Although the final vote at the Horticultural Union meeting on indorsement of the central selling agency plan was practically unanimous, only a few votes being cast against it, vigorous opposition to the move was offered in a lively session of several hours attended by sixty or more growers. The opposition was led by Ed Remy and H. B. Scudder. Before adjourning the meeting passed a resolution urging the Yakima Valley Fruit Growers' Association to market all its soft fruits, and if possible all its fruit, including apples, through the new central agency. Although not included in the resolution, its purpose, as stated in discussion, was to urge making the Yakima Valley as near a unit as possible in the marketing of its fruit. A meeting of fruitgrowers of all affiliations was held at Parker last night and resolutions were passed indorsing the new central agency.

President Nelson, speaking for a majority of the directors of the union and for himself personally, declared: "We hope and firmly believe that the Yakima Valley Fruit Growers' Association will join this movement; if not immediately, at least next season. We have the assurances of C. H. Swigart, the association's representative on the committee, that the association is willing to give us its tonnage except winter apples. Should the association join it would be the purpose to give them just the same representation on the selling board as each of the others have. The union has done well, but whether it can continue to do so if the present cutthroat policy continues is a question. I honestly believe that if you fail to accept this you are blocking the progress of something that means a great deal for the Yakima Valley."

The agreement, laid before the meeting of union members at the Y. M. C. A., was as follows: "We, the undersigned, in organizing the corporation named, the 'Yakima Fruit Sellers,' agree as fol-

Continued on page 32

*The Name Behind the Goods*

# Time Brings Out Its Greatest Value

Time is the big test that your motor car must meet. And time is the test that will bring out the greatest value in the CASE "25."

No matter how pleased you are with its beauty, its comfort, its economy or its speed—you can have still greater satisfaction in its wonderful wearing qualities.

Men buy CASE cars to keep. They buy them because they embody the maximum in appearance and riding ease, with a mechanical sturdiness which can be most fully appreciated only after long service.

The time really to judge a CASE "25" is at the end of the third or fourth season.

## Least in Price of the 30 Popular-Priced Cars

Of the 30 medium priced cars—from \$1250 to \$1500—the CASE "25" costs least, because—

Our prices includes *all* necessary equipment: Extra Tire, Inner Tube and Tire Cover on an extra Rim, Weed Non-Skid Tire Chains and Eight-Day Clock.

These features are doubly necessary for country driving, where garage service is often many miles away. Other cars do not have them.

They amount—with 5% discount we give if cash—to precisely \$110.25.

You must add this sum to the price of any other car in this class. Do this and you will see that it really costs more than the CASE, complete, at \$1350.

### We Save in Selling

CASE cars are sold through the same organization that handles the CASE line of farm power machinery. Hence we are able to distribute our cars at exceptionally low cost.

The extra selling expense, which other makes must bear, is saved in the CASE "25" and goes to you in the form of better construction and better equipment.

### Send for Catalog

Our new illustrated catalog tells you of the many ways in which we spend to your advantage the money we save in selling.

Read this book before you buy a car. Learn the real reasons why time brings out the value in CASE cars as it does in other CASE products.

**CASE "25" Complete \$1350—5% Discount if Cash**



NOTE - Ask us also for our 1915 catalog picturing and describing CASE Steel Threshing Machinery, Steam, Gas and Oil Tractors, CASE-Racine Tractor Gang Plows, Corn Shellers, Hay Balers and Road Machinery. Sent free upon request.

# CASE

*The Car With the Famous Engine*

J.I. Case T.M.  
Company  
(Incorporated)  
Founded in 1842  
Dept. 548  
Racine, Wisconsin  
(278)



# SEPARATORS

Quickly Made  
Sweet and  
Sanitary  
by this  
Hygienic  
Cleanser



Sample can and  
book containing 6  
beautiful colored  
prints for children  
free.

CUDAHY,  
Dept. 5  
111 W. Monroe St.  
Chicago, Ill.



## Cutting the Cost Per Box Increases Margin

**O**RCHARD tractors are coming in more strongly each year as a factor in cutting the cost per box, and in the last few years especially the smaller machines have been perfected to a stage where the leading makes, at least, can be depended upon to stand up under the work and earn good dividends. Two years ago, thirty motor horsepower was a low rating for a successful tractor. A machine of that size was called a "small" tractor. But mechanical improvements come fast when a start is made in the right direction, and the present small tractors are really small. Good machines—weighing about what four good horses would weigh, costing the price of eight, doing the work of ten and taking up less ground space than two—are now to be had, with a responsible manufacturer's guarantee behind them. Fifteen to eighteen motor horsepower, and eight to ten horsepower on the drawbar, is now about the average as put out for orchard work. What such a tractor will do and how much money it will save are things that will differ with every farm, but where one man made a thirty-horsepower tractor pay in an orchard, ten can make money on one of half to two-thirds that size. The type of tractor will also cut quite a figure, as more can be done with some kinds than others. Suppose that one pays the price and gets a tractor fully adapted to orchard work. Then he could expect to work it about as follows: 36 to 50 inches of plows is a safe load to handle at 6 or 7 inches deep in orchard or vineyard land that has had time to settle since the last cultivation. That

means, at a speed of  $2\frac{1}{4}$  miles an hour, 8 to 11 acres of plowing per day. The tree rows not plowed will just about make up for the time lost in turns, etc. A double-disc harrow, from 6 to 8 feet wide, according to soil and throw of discs, and sometimes a smoothing harrow behind, should not be too heavy a load for such a tractor if properly designed for work on plowed ground. The first cross working could be taken care of very nicely with such a rig at the rate of 16 to 20 acres a day, again not deducting unplowed tree rows. Keeping the orchard cultivated is a job that pays well and keeps on paying as long as you do it. G. E. Browne of Spokane Bridge, Washington, has only 700 acres of Wagener, Jonathan and Rome Beauty apples, but his tractor (a large size) and harrows cover about 9,000 acres a season keeping the place clean—in other words, about 13 trips over the whole area. He makes 45 to 50 acres a day with a sixty-horsepower tractor (72 acres in 10 hours one day) at a cost of 20 to 25 cents per acre, including labor, fuel, oil and repairs to tractor, spring-tooth harrow and weeder. At that rate the handy small tractor ought to cover 15 to 20 acres a day with a heavy set of harrows, while on high speed (3 to  $3\frac{1}{2}$  miles an hour) with a lighter load, 25 to 35 acres of crust could be broken up in a day, to say nothing of night work besides. An electric lighting equipment doesn't cost much extra, and sometimes it is worth as much as another whole tractor.

The wide wheels or track of a tractor will also come in handy at harvest time, as crates or boxes can be picked up

the field and taken to the packing house. Hauling from there to cold-storage house or railway station can be done quickly and cheaply with the tractor, and it is worth a good deal some seasons to get in ahead of the rush. A tractor of this size can handle from 12 to 14 tons on the middle speed at better than two miles an hour on solid, smooth, level roads. You can cut that square in two very easily if you have bad roads and heavy grades, but there would be the same trouble with teams. Go to market slowly with a big load and come back fast with the empties is good advice if your tractor has two speeds. If it has three, that is, low, middle and high, you will find the "low" a great time-saver in helping you over the worst spots in the road.

One hundred days of work a year will earn a tractor's way and pay interest on the outlay. Taking the minimum capacity per day, there would be about the following tractor work on an eighty-acre orchard: Plowing, 10 days; cross-work, 5 days; cultivating, 65 days; hauling, 20 days; miscellaneous, 20 days, a total of 120 days.

There are easily enough odd jobs to keep a tractor busy 20 days extra, and the 65 days for cultivating are a minimum, rather than an average, for best results. Neighbors can always be found who have work for a tractor to do, and as a matter of fact the yearly work of a small tractor is more apt to be 175 to 200 days than below that. Small tractors nowadays are snug and compact—not as high as a horse and almost as short-turning. Under the branches, turning up one row and back the next, over cultivated ground without packing—the little gas tractor is a very handy tool. No currying, no feeding when idle, no watering or harnessing, only one driver—it is a machine that is fast coming to be a necessity in keeping down costs to beat the middleman's game.

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## Orchard Yarn

Progressive orchardists, those right down to the minute in methods of protecting heavy laden fruit trees, are agreed that tying branches with Orchard Yarn is the modern way of supporting orchard trees. It is not expensive, is easily done, and the time to tie is when trimming. The spurs are then tougher, less easily broken off than later. Leaves are not in the way and all parts of the tree can be seen. Saving but a small percentage of trees from being broken down will pay for the expense of tying an entire orchard. One-ply Tarred Manila Yarn will run about 200 feet per pound. Two-ply will run from 90 to 100 feet per pound. Put up in 5-pound balls or on 10-pound spools. In 5-pound balls the yarn pulls from the inside and is more easily handled.

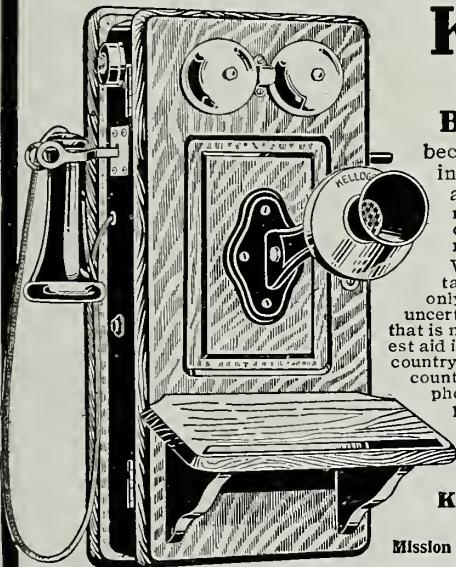
Sold by all merchants handling orchard supplies.

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# Final Telephone Efficiency

**Y**OU can get it from the instrument shown here. One of the Kellogg kind. Works on any kind of a line and with any kind of telephone. Rings clearly with 40 telephones on the line. Compact, durable, light. Less wall space. Unbreakable receiver and mouth piece. Lightning arrester. Secret service push button to ring Central without ringing neighbors. No repair bills. 5 year guarantee on transmitter.



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Then BE SURE this brand is on the kegs you get

Honest Quality and Full Count have made them the World's Standard, which is why you should insist on

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## The Northwest Fruit Shippers

On March 11th the official representatives of nearly all of the principal marketing concerns of the Northwest met in Seattle for the purpose of effecting a marketing organization. H. M. Gilbert of North Yakima was appointed temporary chairman, C. W. McCullough of North Yakima, temporary secretary. The committee on membership organization named was: C. W. Grant, chairman; G. M. McKee and Chas. Crawford of North Yakima; J. H. Dingle, Conrad Rose, Grant Patten of Wenatchee; J. H. Robbins, general manager of the North Pacific Fruit Distributors, and W. F. Gwyn, general manager of the Northwest Fruit Exchange.

The report rendered by this committee was accepted as a whole with a few minor changes. A permanent organization was effected to be known as the "Northwest Fruit Shippers' Council," the membership being open to shippers in Oregon, Washington, Idaho and Montana handling fifty cars or more per year. Dues were fixed at one hundred dollars. It was decided the governing board should consist of fourteen members, to be selected as follows: One representative from the North Pacific Fruit Distributors; one from the Northwest Fruit Exchange; two from Wenatchee, outside of the above-named organizations; two from Yakima Valley, outside of the above-named organizations; one each from Hood River, Oregon; Lewiston, Idaho; Clarkston, Washington; Southern Idaho; Montana; Spokane, Washington; Rogue River, Oregon; Walla Walla, Washington, and Western Oregon.

It is the intention of the Northwest Fruit Shippers' Council to call a meeting of the governing board of fourteen members as often as conditions and circumstances may render necessary. The following officers were elected for the ensuing year: H. F. Davidson, Hood River, president; Conrad Rose, Wenatchee, vice-president; H. M. Gilbert, North Yakima, second vice-president; Worrill Wilson, Seattle, secretary and treasurer. Other members of the governing board elected were: W. F. Gwyn, Seattle; C. M. McKee, North Yakima; G. W. Coburn, Wenatchee. The balance of the members of the governing board are to be elected later.

### Gophers

Fruitgrowers and alfalfa growers in the spring are always crowded with work and too frequently do not realize that it is in the spring that the gophers begin their active work. When a tree is lost the fruitgrower loses all the way from \$1.00 to \$10.00 or more, according to the age. Consequently the fruit-grower probably suffers more heavily from the damage done by gophers than any other class of farmers. Alfalfa fields are sometimes almost entirely ruined by gophers. Much of the damage is done by the irrigation ditches being undermined, and altogether it is supposed that the damage done by gophers in one season amounts to possibly millions of dollars. Every effort should be made at this season of the year to destroy them.

## Northwest By-Products Board

The fresh fruit situation makes it inevitable that a very great number of canneries, evaporators and other kinds of fruit products plants will be established in the Northwest during the next two years. There is a real need for many of these if the districts east of the mountains are to maintain their fruit business upon a sound basis. Unless controlled, most of these plants will be started wrong. Many will be badly managed and many will be organized where there is no need for them. The result will be failures and much needless loss of money. While this is going on the market will be demoralized because the badly managed plant is usually just as badly off in its selling. The result will be serious injury to the business of the existing plants. All this will take place unless the situation is controlled.

The Northwest By-Products Board believes that its function is just as much to help control the general situation as it is to help communities start plants that will take care of their surplus fruit. In that work we need the help and co-operation of every existing cannery, evaporator, dried fruit packer or other form of plant. The present industry should be as closely tied together as possible, so as to establish standards of pack, a reasonably uniform price and a co-operative reaching out for new markets. Once that is done the industry will be stabilized and our committee can work with the fruit products plants toward helping take care of the surplus fruit in the districts where it is now going to waste.

Many of these districts are probably not ready for plants. They have not volume enough. With a united strength we can work with the railroads to get a low express rate for berries or freight rate for fruit that will permit the assembling of this stuff at existing plants until the district develops an output that justifies a cannery or evaporator. In those districts where there is a manifest need for plants at once, the committee can help promote these in such a way that they will be operated right and their product can be sold side by side with that of the existing plants, and the market will not be demoralized. This will help the new plant and will protect the old ones.

Perhaps the whole situation cannot be worked out as smoothly as that. A great deal of difficulty will be experienced in getting the existing plants into any kind of an agreement. Also, irresponsible promotions will be started that nobody can control. But the committee believes that, with an organization of all the existing plants, it can do a great deal toward controlling the situation. This general problem was discussed at the recent conference in Portland. Other small district meetings are being held. Soon there will be need to hold another general conference. In the meantime we wish to ask you to think over the situation and frankly and fully write us just what you be-

# Bean Giant Power Sprayer

## The Power Sprayer for Large Orchards

For downright dependability—efficient work—high pressure—ease and economy of operation—low cost of maintenance—strength—durability—and all round satisfaction the Bean Giant is in a class by itself. Supplies 2 to 4 lines of hose and has a capacity of 7 to 12 gallons a minute. Good for 4 to 8 acres a day.

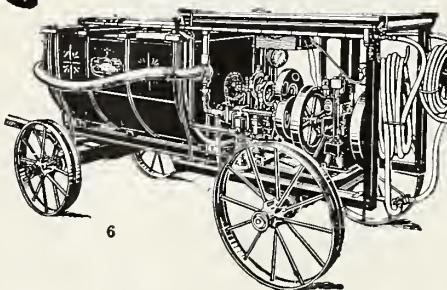
Thirty years' experience in the building of spray pumps is back of this outfit.

## Built Complete Under One Roof

Every part is produced right here in our own factory—with the exception of the Novo engine and we use the Novo because we can't build a better sprayer engine.

**TWENTY-ONE DISTINCTIVE FEATURES** are incorporated into the making of the Bean Giant—Patented Pressure Regulator, Porcelain-lined Cylinders, Rustless Ball Valves, Bean Patented Refiller, Truck with Rocking Bolster, One-piece Steel Frame, and many others.

We manufacture a complete line of smaller power sprayers and hand pumps. Before you invest in any kind of a Sprayer, write for



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It illustrates and describes all Bean Hand and Power Sprayers and pump accessories—and shows just why they are best.

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Now is the Time to Select Your Plants to Beautify Your Home Grounds  
I have just received a carload of new

## Ornamental Shrubs and Roses

from Holland. Send for list and prices.

If you will give me the measurements of your lot and location of buildings I will give you the benefit of my experience in selecting the right plants for the right place.

I carry a full line of **Fruit Trees and Berry Stock**, wholesale and retail.

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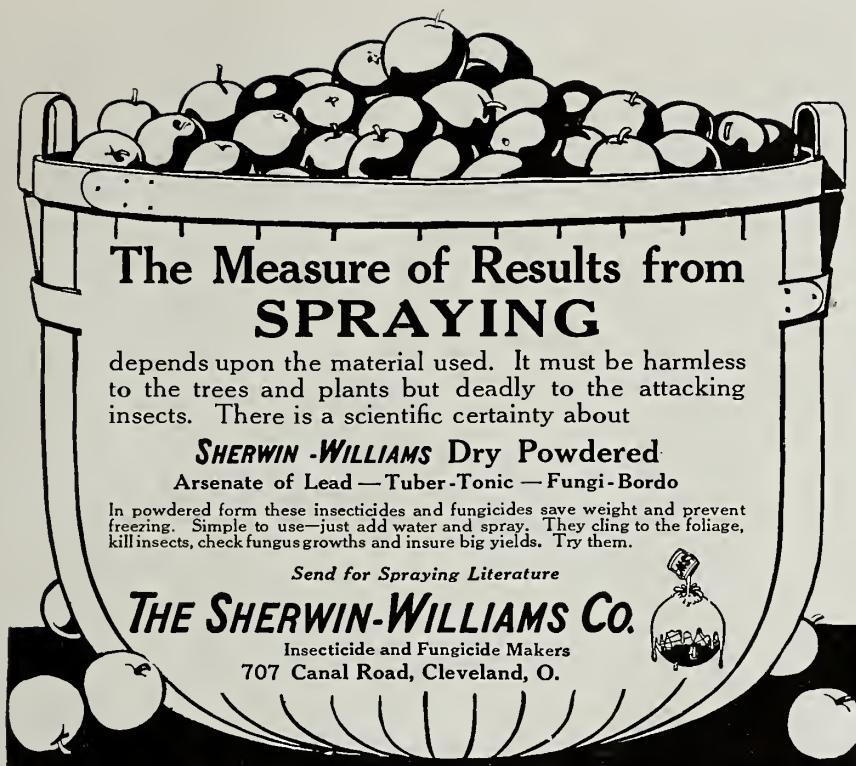
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in an orchard property in Maine. About 400 acres, 2,000 producing trees, 12,000 one and two-year-old planted with dynamite, two sets fine buildings, lots of equipment. All for sale at ruinous sacrifice and most of purchase price can remain on long mortgage. If you have a little money and are looking for a bargain, address P. O. Box No. 412, Philadelphia.



## The Measure of Results from SPRAYING

depends upon the material used. It must be harmless to the trees and plants but deadly to the attacking insects. There is a scientific certainty about

### SHERWIN-WILLIAMS Dry Powdered

Arsenate of Lead — Tuber-Tonic — Fungi-Bordo

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Insecticide and Fungicide Makers  
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PRICE and QUALITY always right.

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Required by the Act of August 24, 1912.

of "Better Fruit," Published Monthly at Hood River, Oregon  
for April, 1915

Note: This statement is to be made in duplicate, both copies to be delivered by the publisher to the postmaster, who will send one copy to the Third Assistant Postmaster General (Division of Classification), Washington, D. C., and retain the other in the files of the post office.

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Name of Business Manager, E. H. Shepard. Post office address, Hood River, Oregon.

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Known bondholders, mortgagees and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities: (If there are none, so state.) None.

Average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above: (This information is required from daily newspapers only.)

E. H. SHEPARD, Editor and Publisher.

Sworn to and subscribed before me this 19th day of March, 1915.

(Seal)

ERNEST C. SMITH,  
Notary Public for Oregon.

My commission expires August 7, 1916.

lieve ought to be done. The nearer we can come to all agreeing on something, the better off we will all be.—Northwest By-Products Board.

### Bees Are Not Poisoned by Sprays

There has long been a belief that spraying blossoms with arsenate of lead or other poisons would kill the bees that visited the blossoms after spraying in their search for honey. Professor C. W. Woodworth of the University of California has conducted some careful investigations in the Pajaro Valley, which are related by him in "Gleanings in Bee Culture," showing that this fear is groundless, that the spraying can be done at the time best for codling-moth control, and that the bees can visit the blossoms without injury. A colony of bees from the university at Berkeley was shipped to Watsonville and placed in the midst of a forty-acre apple orchard at Watsonville just before a heavy spraying with arsenicals was given. After being kept there for some time without apparent injury to the bees, the hive was shipped back to Berkeley and kept closed until a number of the bees were dead. These were taken out and a considerable amount of arsenic was found upon them, but it was all on the outside, coming there by contact, as would dust or powder of any kind. No internal arsenic was found and the arsenic apparently had nothing to do with their deaths. There was likewise no trace of arsenic in the honey gathered by the bees from the blossoms sprayed with arsenicals. The right idea is to spray when the blossoms need it. Keep bees if convenient to pollinate the blossoms, but do not worry about the effect of the spraying on them.

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# BETTER FRUIT

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Official Organ of The Northwest Fruit Growers' Association  
A Monthly Illustrated Magazine Published in the  
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All Communications Should Be Addressed and Remittances  
Made Payable to

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Entered as second-class matter December 27, 1906, at the  
Postoffice at Hood River, Oregon, under Act  
of Congress of March 3, 1879.

**Business Improving.—From the trend of opinion as expressed by financiers and able thinkers, we are justified in assuming that not only is business better but we can look forward with confidence to a steady improvement. A recent article in the World's Work furnishes some interesting data and assurance of better times and better business. The Pennsylvania Railroad has recently sold \$49,000,000 worth of 4½% mortgage bonds; the Illinois Central has also sold millions of securities and other railroads are doing the same. The railroads and business are already borrowing money for productive purposes because money is plentiful and cheap. It is eight months since the war broke out, which created a drastic stringency in financial circles. That period of uncertainty and fear has passed. At the present time an abundance of cheap money exists; it is the biggest stimulant in the world to create business. Capital cannot, will not and does not lie idle long. City banks which are required by law to carry a 15% reserve have from 25% to 40%, or twice the normal amount required, which means that double the amount of money in normal times is now idle. This condition cannot and will not continue; this dormant capital will become active and with it business will become good.**

It is not intended by this prophecy that business will come with a jump, but it is the opinion of the editor that a steady, gradual, safe improvement can be reasonably looked for from now on. In December last the balance of trade in favor of the United States was \$132,000,000. At the present increase of trade balance in our favor, it will be a billion dollars before the year is over. The World's Work states that the

# BETTER FRUIT

United States during the war is saving over \$200,000,000 per year which has usually been spent by American tourists in Europe. All of these conditions point to a continuation of cheap money and the encouragement of industrial activity. The stringency is past; the emergency measures taken at the outbreak of the war are no longer necessary; the gold pool has been dissolved and the cotton pool is no longer needed. The stock exchanges are open, although minimum price restriction still prevails. Our condition is now improving with certainty and we may reasonably expect it to continue to improve even if the war continues. A review of history shows that usually following war business conditions are much improved. After the Civil War business showed a steady improvement, which continued with apparently few setbacks until 1907. The World's Work states that there is much historical precedent for decent optimism.

The World's Work further states: "With such possibilities before us, a courageous and patriotic thing for men to do who have brains, energy and capital, is to use them so that our bread lines may be shortened and an end made to the setback caused by the disruption of the normal relations of trade by the sudden outbreak of the war. There is before us an opportunity for an immediate quickening in business,—an opportunity which it is our duty to make the most of. It is noted chiefly on cheap money, but not alone on that. There are other encouraging signs which we can welcome. It is a time when optimism and energy can gain a fair reward."

**The Board of Control of the Marketing Organization.—The selling concerns have organized with a Board of Control, one representative to be given to each of the large concerns like the Northwest Fruit Exchange and the North Pacific Fruit Distributors, and in the different sections where there are several other marketing organizations they are accorded a representative on the Board of Control. For instance, if there are eight marketing organizations in any particular district, then these eight are given two representatives, making in this way a total of fourteen. This small body, representative of the marketing concerns, can confer with the Board of Control of the fruitgrowers' organization in reference to the policy to be pursued. It is generally believed that they can agree on some harmonious condition which will be conducive to great good for everyone interested in the fruit industry. Through this plan, it is believed that the markets can be stabilized; it is believed the marketing concerns will become more efficient and better service rendered to the dealer; the standard of packing can be improved and be made more uniform. It is also believed that this combination will result in better prices for the fruitgrower by elimination of unnecessary self-competition or cutting of prices. At the**

same time it is hoped and believed the consumer in the end will be given better care and obtain his fruit even at a less price than he has done for many years in the past.

\* \* \*

Railroads have been criticised by the public very extensively; while perhaps some of it has been just, much has been unjust. The railroads have been great developers of communities; they are creators and builders of business. Without the railroads the Northwestern States,—Oregon, Washington, Idaho and Montana,—would still be not much more than a wilderness or desert lands. The railroads have peopled these four states with a population of nearly four millions. Apparently it is not easy going for the railroads. The Interstate Commerce Commission has regulated rates,—not that they have done so unwisely, but nevertheless it has affected the income of the railroads. The labor organizations have demanded shorter hours and frequently better pay. With the income reduced and the expenses increased, many railroads have found difficulty in maintaining the equipment, trackage and good condition. The Interstate Commerce Commission recently granted an increase of five per cent. It is believed this will do much to improve financial conditions with our railroads. It is hoped it will enable them to do such improvement and extension work as may be necessary for the development of the country. It begins to look as if the public had begun to understand the importance and

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These two books and large bird's-eye view give a comprehensive, honest history and description of the state, her principal cities, resources and her two great Expositions. Sent prepaid for 35 cents each or all three for a one dollar bill, money order, draft or check. Order now, addressing

North American Press Association,  
Publishers,  
1420 Hearst Building, San Francisco.

necessity of proper railroad service, and it is to be hoped that the railroads will receive proper consideration from the public in the future.

**The 1915 Outlook.**—During the year 1914 many adverse conditions prevailed which were accountable for the low prices that the fruitgrower realized. In the first place, an immense crop; in the second place, a general depression of business; in the third place, the war broke out just as the apples were beginning to go on the market; in the fourth place, the crop got ripe all together; in the fifth place, there was much indiscriminate marketing and cutting of prices and unnecessary competition; in the sixth place, much fruit was shipped without ice to save the extra expense. Perhaps this is enough to account for the low prices prevailing in the year 1914. It is reasonable to assume that such a combination of conditions will not occur again very near in the future. The Northwest feels assured that much better marketing conditions will prevail and it is reasonable to assume a big crop will not follow on top of last year's crop, so therefore growers can reasonably hope and expect to obtain much better prices than during the past year.

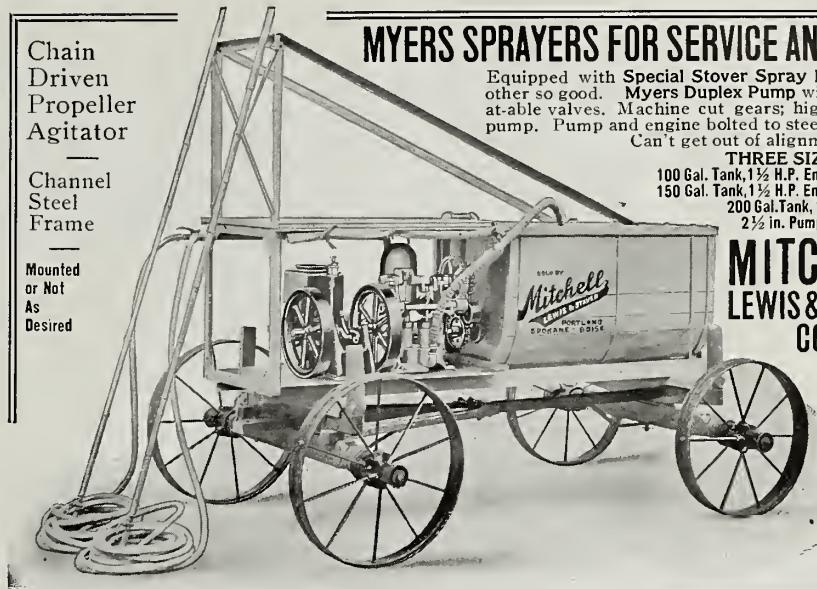
**The Policy of the Growers' Council.** It will be the aim of this body, through their Board of Control and Executive Committee, to create a policy that can be consistently followed by different marketing concerns. All of the different members of the Board of Control and Executive Committee, in the minds of the fruitgrowers, are safe, sane and conservative people; therefore it is to be assumed they will act with good judgment and impose no condition on the marketing concerns that cannot be reasonably complied with. Such a policy will meet with success and support of the marketing concerns. On the other hand, if their demands were impossible opposition would naturally spring up which would result in friction and the good work impaired in the very beginning. But it is believed, as already stated, that the Board of Control and the Executive Committee are such reasonable men that they will only ask such reasonable considerations as the marketing concerns will cheerfully comply with.

**The Growers' Council, Its Board of Control of Ten and the Executive Committee of Three.**—This issue contains a very interesting personal account of each member of the Growers' Board of Control and the Executive Committee of Three, which should prove very interesting to every fruitgrower of the Northwest. The growers have placed a great big responsibility on these people and it is well they should have as much information about their past history as is obtainable. "Better Fruit" has secured from each one of the Board of Control and Executive Committee a brief personal account of their

Chain  
Driven  
Propeller  
Agitator

Channel  
Steel  
Frame

Mounted  
or Not  
As  
Desired



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**LEWIS & STAVER**  
**CO. PORT-**  
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ALSO  
SPOKANE  
AND  
BOISE

past and present, which is embodied in a short personal article in this issue,—the age, birthplace, date of birth, different lines of business each one has been engaged in, different public positions each member has held, his present business and his present public office.

**Concentration of Tonnage.**—The opinion seems to prevail among quite a few growers that, with the Board of Control, everything will be clear and easy sailing for the independent shippers and small shipping concerns. The Growers' Council and Board of Control and Executive Committee entertain a different idea. This committee states very positively they feel they can render far more efficient service with a smaller number of marketing concerns

than with a large number, therefore it is their desire that the tonnage be concentrated as much as possible, and it is to be hoped the grower will choose with wisdom and judgment the selection of his marketing concern, selecting such one as in his opinion he feels is reliable and such a one as will secure good, satisfactory prices.

**Spraying.**—In these times of rigid economy the fruitgrower should give the matter of spraying careful consideration. Economy must prevail in every feature of apple producing as well as in marketing, therefore we are publishing a splendid article entitled, "Spraying Economy and Insecticide Efficiency." The object of the grower is to get a clean crop of fruit, therefore he sprays. At the same time it is im-



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### Band Trees About Two Weeks Before Insects Appear and Get Best Results

Easily applied with wooden paddle. One pound makes about 10 linear feet of band. One application stays sticky 3 months and longer—outlasting 10 to 20 times any other substance. Remains effective rain or shine. Won't soften—won't run or melt, yet always elastic, expanding with growth of tree. No mixing, simply open can and use. Will not injure trees.

### For Tree Surgery

Tree Tanglefoot is superior to anything on the market—it is the best application after pruning or trimming. It will water-proof the crotch of a tree or a cavity or wound in a tree, when nothing else will do it.

### Sold by All First-Class Seed Dealers

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Write today for illustrated booklet on Leaf-eating Insects. Mailed free.

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Manufacturers of Tanglefoot Fly Paper and Tree Tanglefoot

(38)

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MOST NOZZLES MAKE A  
BIG SHOW AND A LOT OF  
NOISE ABOUT IT BUT DO  
NOT HIT THE RIGHT SPOT.  
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HAS DOUBLE THE  
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A CROWN RELIEF VALVE  
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LOT OF TROUBLE  
THERE IS NO "JUST AS GOOD"  
PRICE \$4.00 BY PARCELS POST.

Dear Sirs:  
herewith hand you money order for One  
Dollar to pay for the two mass-o-spray nozzles  
you sent me for trial some time ago. I want to  
say that you make no mistake in selling these  
goods on the plan you do for they surely talk  
for themselves. I bought a new sprayer of the  
largest capacity this spring, and I think these  
nozzles have increased its efficiency at least 25  
per cent. They set a pace that is hard to follow.  
You will hear from me again as I need  
supplies. Thanking you, I am, Yours truly,  
Payette, Idaho, Apr. 27.'12. L. E. KEELER

We will send  
**Two by Mail for  
One Dollar**

Send Money Order,  
Chicago Draft or Currency.  
If personal check is sent,  
add 10 cents for exchange.

**Crown Specialty  
Company**  
1629 Washington Blvd.  
CHICAGO

portant that this should be done economically, therefore spray should not be wasted or used stronger than necessary to control the trouble. In many instances two sprays can be combined, thereby saving much extra cost in the way of labor. The combination of sprays has been shown in previous editions of "Better Fruit" and will not be repeated in this issue. If the grower is uncertain about any combination of spray materials, it seems wise to suggest he consult someone who is posted or write the Experiment Station in his particular state.

\* \* \*

**Does Spray Poison the Bees?**—Many articles have appeared in various publications generally stating that bees were poisoned by sprays. Therefore attention is called to an article in this issue called "Bees Are Not Poisoned by Sprays," with the suggestion that fruitgrowers look into the matter during the coming season and determine for themselves in a definite way whether their bees are poisoned by spray or not.

\* \* \*

**Advertising the Apple.**—In this issue is a very interesting article written by Mr. Atwood of the McCann Advertising Agency, a very able man, in reference to advertising the apple, which should be read by every apple producer.

### Time for Grafting Trees

The question is often asked, "How late can you graft trees?" This question probably can be answered easily in this way: You can certainly graft apple and pear trees up to the time their leaves are as big as squirrel's ears, and I have heard of cases where grafting has been done after the leaves were of full size. However, there is one thing that must be remembered and that is that, to do successful grafting, the scions should be absolutely dormant. The buds should not have broken. After the scions have started to grow it is very hard to make successful unions. Where a large amount of grafting is to be done it is better practice to cut the scions in the middle of the winter, and stratify them in sand, putting in a layer of sand, then a layer of scions, and so

on. Keep the sand moist, but not wet, nor too dry. If it is kept too wet the buds will drop out and mold, and if it is too dry they will shrivel up. With cold storage facilities it is very easy to keep scions and buds for grafting in storage for a long time. In the case of June budding we can keep the scions on ice until June, so as to hold the buds dormant.

"The greatest hope of the railways and the public in the future lies in intelligent regulation. The railroad, generally speaking, adds a percentage to the farmers' prices that is not large." —Hon. James Wilson, ex-Secretary of Agriculture.

## CLOVER SEED

The very finest seed grown in the valley at the lowest possible prices. Write and tell us how much you need and we will quote.

**D. A. WHITE & SONS**  
SALEM, OREGON

F. A. BISHOP, Secretary  
**HOOD RIVER ABSTRACT COMPANY**  
HOOD RIVER, OREGON  
ABSTRACTS INSURANCE  
CONVEYANCING



**Two a Day**  
TO  
**CHICAGO**

via Minneapolis and St. Paul

**"North Coast Limited"      "Atlantic Express"**  
FINE TRAINS — FAST TRAINS

Through Spokane, Butte or Helena, Fargo, Moorhead.

**One to St. Louis**  
"Mississippi Valley Limited"

Accommodations to suit — Drawing-rooms, Compartments, Open Sections in Standard Sleeping Cars, Sections in Roomy Tourist Cars, and Coaches. On the Diners that best of all service, and the "Great Big Baked Potato."

**LET US TELL YOU ABOUT IT**  
No matter where you will start from, or your destination,  
let us quote you fares and help arrange your trip.

**Northern Pacific Railway**  
A. D. Charlton, A. G. P. A., Portland, Oregon

## Mr. W. F. Gwyn Comments on the Fruit Growers' Council

The following extract is from an article which appeared in the Produce News as being an interview with Mr. Gwyn. Mr. Gwyn says: "It is a cause of sincere congratulation that jingo ideas were tabled almost unanimously and that the platform finally adopted is of a kind to unite growers and selling factors on a comprehensive constructive program. The personnel of the Executive Committee and Board of Control, together with the Shippers' League to be formed, is additional indication that the fruit industry of the Northwest is entering upon a new era. The result of the three days' conference at Tacoma is a 'get-together plan' that meets with our entire approbation. The Exchange has advised its grower members through an official bulletin to rally in enthusiastic support of a regime which can bring nothing but good to all sincere workers, whether in the producing or distributing ends of the industry."

Commenting upon the formation of the Yakima Fruit Sellers, which is a consolidation of Richey & Gilbert, the Yakima Horticultural Union and the Yakima Fruit Growers' Exchange, Mr. Gwyn is reported as saying: "This merger reduces the number of competing factors and in this respect is a step in the right direction." He further comments: "I have never believed it possible or profitable to market an overwhelming percentage of Northwestern fruit tonnage through any one agency. Human nature, in growers as in other people, requires an alternative. At least two marketing institutions are indispensable to the well being of the Northwestern fruit industry, just as the welfare of the country is better served by two strong political parties than when one is too long entrenched in power."

Mr. Gwyn regards the launching of the Yakima Fruit Sellers' announcement as a home selling organization for the exclusive benefit of the Yakima district. That it indicates that a considerable number of Yakima growers seriously question the economic soundness of the central selling agency principle by creating the Yakima Fruit Sellers, a local selling agency. Mr. Gwyn says: "This opens the field for competition between the home selling agency and the general selling agency, wherein a contest will take place for efficiency and service, with a survival of the concern which gives the grower the best results." Undoubtedly some interesting rivalry will take place, but the Exchange will play the game fair, and I anticipate nothing but the same spirit with Mr. Gilbert and his associates of the Yakima Fruit Sellers.

### "Pop" Rulofson Is Still on Deck

Mr. A. C. Rulofson's legion of friends among the fruit industries on the Pacific Coast have missed his smiling countenance and glad hand at the 1914 fruit shows, and many inquiries have been made as to what has become of

## Cutting the High Cost of Plowing

One man who bought a Baby Caterpillar a year ago writes: "Have sold off all my horses. The 'Baby' does all the work they did, only cheaper. It surely cuts the high cost of plowing."

# BABY CATERPILLAR

Reg.U.S.Pat.Off.

*Don't say Caterpillar unless you mean Holt!*

An orchardist writes in glowingly: "I figure the Baby Caterpillar is cutting the cost per box quite appreciably. The 'Baby' cultivates close up to the trees without hurting the branches, and turns right from one row into the next. Also, since I can cultivate more frequently than with horses, I am getting a bigger crop and better fruit than ever before."

Another owner writes: "Three years, and less than \$25.00 for repairs."

When the owners boil over with satisfaction this way we realize more than ever how good a machine the Baby really is.

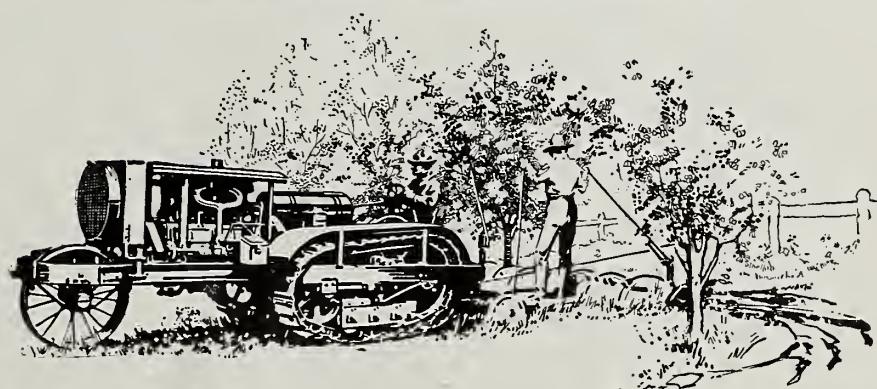
But send for new Baby Bulletin BE 176. It gives more exact figures on horse and Caterpillar costs of farming.

### THE HOLT MFG. CO.

(Incorporated)

Stockton, Cal. Spokane, Wash. Peoria, Ill.

Cons. Wagon & Mchv. Co., Sales Agts., Salt Lake City, Utah.



## Get in Business for Yourself

THIS IS YOUR CHANCE—WILL YOU SEE IT?

### The King of the Woods Drag Saw

with or without BUZZ-SAW ATTACHMENT  
with or without STEEL STUMP-PULLING ATTACHMENT  
will cut a 5 foot log in 5 minutes, and small logs as fast with buzz-saw. It will pay your neighbors to have you cut their wood. Will pull itself over the steepest hills and roughest ground. IT ANSWERS THE QUESTION—HOW CAN I MAKE MORE MONEY ON THE FARM? You want to know more about it. Send for Catalog KW 4 WRITE TODAY.

REIERSON MACHINERY CO.  
Sole Manufacturers

Portland, Oregon



Mfg. by Reierson Machinery Co., Portland, Ore.

## ENCYCLOPEDIA OF PRACTICAL HORTICULTURE

JUST OFF THE PRESS

The only complete, thorough manual of fruit growing published—covering every feature—planting, pruning, cultivating, spraying, diseases, harvesting, etc., as used and approved by Northwest fruit growers. Contains valuable statistics. All reading matter arranged conveniently for reference and indexed.

It tells how to do the things that every fruit grower must do who is growing fruit as a business. **Three Large Volumes Handsomely Bound**

Write for circulars containing full descriptive matter and prices.

ENCYCLOPEDIA OF PRACTICAL HORTICULTURE

407 Miller Bldg., North Yakima, Wash.

# One-Man Power Sprayer

## A Complete High-Grade Outfit at Small Cost

Here's the rig thousands of small farmers, orchardists and vineyardists have been looking for—a dependable, reliable, efficient, high-pressure power sprayer at small cost. One man does all the spraying. One horse can haul it anywhere. Supplies one line of hose and will cover from 2 to 3 acres a day. This is the first time you have been offered Bean quality in a low-priced outfit. Note these features of the

## BEAN EUREKA

**LIGHT WEIGHT**—Makes it an easy pull for one horse and a mighty handy sprayer for rough and hilly land.

**INEXPENSIVE TO OPERATE**—One man does it all. Low first cost and practically no cost of upkeep.

**NOVO ENGINE**—a sturdy sprayer engine as you can find. Novo spells satisfaction.

**ALL COMPLETE**—Including Patented Pressure Regulator, Rotary Agitator, Truck, Canvas Cover and Curtains, Hose, Rod, and everything complete.

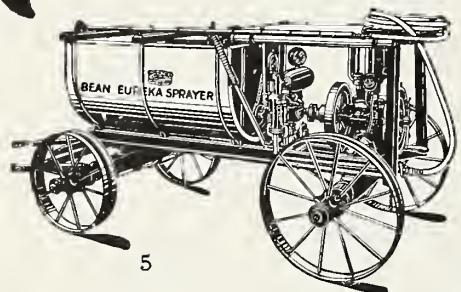
**THIRTY YEARS OF EXPERIENCE** are back of the Bean Eureka—and experience counts.

Send for Free Catalog  
28-A

which illustrates and describes the entire Bean Line of Hand and Power Sprayers. Tell us the size of your orchard and we'll help you pick the Bean best suited to your requirements.

**Bean Spray Pump Company**

213 West Julian Street  
SAN JOSE, CAL.  
12 Hosmer Street  
LANSING, MICH.



FOR BEST RESULTS USE OUR

## Filtered Lime-Sulphur Solution

(EVERY DROP USABLE)

AND

## Neutral Lead Arsenate

MADE IN OREGON

WRITE US FOR PRICES

## Oregon Arsenical Spray Co.

J. C. BUTCHER, Proprietor

CLACKAMAS, OREGON

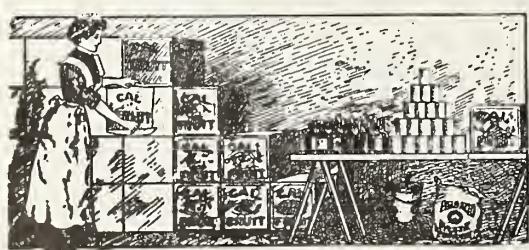
## Paste for Labeling—"Palo Alto" Paste Powder

added to cold water, instantly makes a beautiful, smooth, white paste. Ready for immediate use at a cost of 10 cents a gallon. No labor. No muss. No spoiled paste.

PASTE SPECIALISTS

Robinson Chemical Works

349-351 Eighth Street  
San Francisco, California



him. Mr. Rulofson, early in 1914, went as a trade commissioner from California to the Orient. On his return last July he discontinued the handling of the cement-coated nails that he had boosted for so many years and took a well-earned rest. About the first of the year he was appointed Pacific Coast sales representative for the Pittsburg Steel Company, Pittsburg, Pennsylvania. Mr. Rulofson informs us that they make a complete line of cement-coated nails that are certainly equal to any other brand. Mr. Rulofson's friends will be glad to learn of his continued activities in the nail business, and will undoubtedly look forward to meeting him again at the various gatherings where fruitmen congregate.

## Why Blossomed Fruit Fails

When fruit trees blossom well but do not set their fruit either the climate, diseases or pollination is apt to be the principal reason for failure, as explained by Professor C. I. Lewis, horticulturist of the Oregon Station. These conditions were present to a greater or less extent last year and are likely to occur at any time, for which reason growers should be on their guard to lessen the ill effects. Heavy rains at blossoming time mean, of course, that bees are not flying and that pollination would not take place. Or a heavy frost may occur at about the time the fruit is in blossom, and this often causes lack of setting of fruit. Such diseases as scab of pear or apple and brown rot of prune and cherry will sometimes destroy the entire crop. Insect pests also sometimes are destructive. Lack of pollination may occur, however, with none of these unfavorable conditions present. Many of our trees are self-sterile and require the presence of



Western Agents  
A. I. Root  
Co.

Portland  
Seed  
Company

## Bee Hives and Supplies

If you own an orchard or keep bees you should have a copy of our Catalog. It lists everything for the successful handling of bees and the production of honey.

We are pioneers in the bee supply business in the Northwest, are thoroughly familiar with local requirements and carry a large and complete stock.

Tested Italian Queen Bees at Short Notice  
Ask for Catalog No. 203.

PORLAND SEED COMPANY  
PORTLAND, OREGON



## Throws Any Spray

You should have the ACME Catalog. There are many other sprayers, also powder guns, planters, fruit-picking sack, etc., shown in our big Free Catalog.

This light, handy Acme Compressed Air Sprayer throws any spray material with all the effectiveness of an engine-driven machine.

The air pressure, which can be as high as 60 pounds, drives the liquid through our spiral non-clogging nozzle in a whirling, mist-fine spray. This spiral feature is found only on ACME Sprayers. The nozzle is of solid brass, does not corrode, cannot clog, because the spiral plunger cleans the nozzle with every operation. The

### ACME Compressed Air SPRAYER

holds  $3\frac{1}{2}$  gallons and empties on one charge of air. The tank is heavily galvanized, solidly riveted and well soldered. Air and water tight by actual test.

Seamless brass air pump can be furnished inside as well as out. On request we can furnish brass extension rod for tree spraying and crooked nozzle for low-lying vines.

This sprayer is almost indispensable to vineyard owners. We made 20,000 for Roumanian vineyards this year.

If you are not handy to a dealer we will supply you direct. If you are near a dealer and he happens not to have the ACME Sprayer he will gladly order for you from one of our Western distributors, listed below:

#### WASHINGTON

Marshall-Wells Hardware Co., Spokane  
Holley & Mason Co., Spokane  
Jensen-Kind-Byrd Co., Spokane

Mitchell, Lewis & Staver Co., Spokane  
The Chas. H. Lilly Co., Seattle  
Polson Implement Co., Seattle

#### OREGON

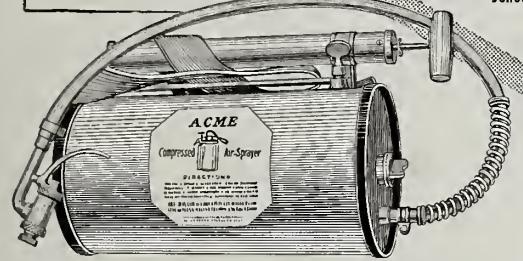
Polson Implement Co., Portland  
Portland Seed Co., Portland

Marshall-Wells Hardware Co., Portland  
Mitchell, Lewis & Staver Co., Portland

ACME Goods are in use on over 400,000 farms.  
If you are not acquainted you should send at once for the catalog.

**POTATO IMPLEMENT CO.**  
327 Front Street, TRAVERSE CITY, MICH.

\$5.00 East of the Rockies



other varieties near them if pollination is to be secured. Lambert, Royal Ann and Bing cherries are all self-sterile and powerless to pollinate each other. Also Gravenstein and Spitzenberg apples and the Comice and Anjou pears are self-sterile.

Professor Lewis believes that the trouble with many of the isolated trees of Portland would be greatly overcome by having other varieties near them for pollination. This condition could be brought about in some instances by grafting other varieties into some of the trees or parts of trees. Those who are interested further in this matter may receive a copy of a letter on pollination now being prepared by the horticultural department of the college by making application. This letter will be ready in the near future and will give a list of sterile and fertile varieties and very comprehensive information on the subject of pollination.

#### Trouble of Non-Blooming Trees

It frequently happens that trees apparently healthy and vigorous refuse to blossom or bear fruit. This, according to Professor Lewis, chief of the Oregon Agricultural College Division of Horti-

culture, is generally owing to the vitality of the trees. "If your trees are on rich soil," says Professor Lewis, "or if there is too much manure or irrigation water used you may force them entirely into wood. This condition would be apt to be true with many of our apples, in which case it may be years before they will bear. Yellow Newtown, Northern Spy, King of Tompkins County, and in fact many of the apple varieties grown in and near Portland, if taken too good care of and over-pruned, will not bear, at least not until they are quite old. The remedy is to let up on the pruning; to prune twice a year, distributing the pruning between the early spring and the middle of June to the middle of July. Do not water them too much and go sparingly on manure. Sometimes these trees are in chicken yards, where the ground has been kept quite moist and is pretty heavily fertilized. Trees under those conditions often do not succeed. With the cherry trees that bloom and fail to set, I am almost certain that the trouble is pollination. The Black Republican can be grafted into those trees and will help them to set, or you can use a special strain of Waterhouse, which can be secured from Eugene,

which will help these trees to set a crop."

David Knight of Sawyer, Michigan, kindly sent this office a very attractive catalog on strawberries for the year 1915.

The E. J. Chubbuck Co., of San Francisco, California, whose advertisement appears in this issue, is offering something new in the way of a gopher trap. The Ideal Gopher Trap is the result of years of experimental work, covering every known method of exterminating the gopher pest. The essential features that make the Ideal a perfect trap are the enclosing doors or claws that grab the rodent and pull it into the cage. If it is a small gopher it will be found inside the cage; if a large one it is engaged between the claws. Being round with thin edges and a trifle larger than the hole, the gopher walks into the trap before detecting anything in his runway.—[Adv.]

## WANTED

Nurseryman, single, wants superintendence of deciduous fruit orchard. Good references; moderate salary; permanent. Address A-Z, care "Better Fruit."

## THIS 2 UNIT PLANT "Did Wonders"

Last Summer  
Built in Various Sizes

**It is the  
MOST EFFICIENT  
EVAPORATOR**

It dries "Fancy" Dried Fruit of all kinds in record time, which brings "Fancy" prices, with low production cost. None "just like it." None "just as good."

**It makes Apples at 8c dry pound worth \$15 per green ton.**

**PERFECT CONTROL OF TEMPERATURE, HUMIDITY AND CIRCULATION.**

Inquire

1005 CHAMBER OF COMMERCE, PORTLAND, OREGON.

**Paulhamus Visits Yakima Valley**

Mr. W. H. Paulhamus, manager of the growers' organization recently formed at Tacoma, spent Friday and Saturday, the 26th and 27th of February, in the Yakima Valley. On Friday he addressed a few of the large districts and on Saturday gave an address in North Yakima. In every district the attendance was phenomenal and Paulhamus was enthusiastically received. On Saturday afternoon he addressed the fruit growers of Yakima Valley in the Armory building, which seats 2,000 persons. Every chair was taken, with standing room only. Mr. J. W. Lavigne, sales manager for the Price fruit grader, who

stopped off at Hood River for a few hours, stated he never saw an audience before in his life that was more enthusiastic. Mr. Lavigne said, "The fruit growers did not applaud Paulhamus, they cheered him." One large fruit grower at the meeting, who had shipped ten cars of high class fruit independently and received twenty-two cents per box net, was asked if he would join the Fruit Growers' Conference and adopt the Tacoma plan. He replied, "Do you think I am fool enough to stay out? I will be there with both feet." Every fruit grower will be requested to sign the following agreement. This is the agreement in Yakima

Valley that will tie every fruit grower in that district to the Tacoma plan. It reads as follows: "We, the undersigned, fruit growers of Yakima District No. 2, consisting of Yakima, Kittitas, Benton and Franklin Counties, in the State of Washington, hereby promise and agree that we will not market or sell our fruit products through any selling agency or dealer who does not affiliate and continue to work in harmony with the Fruit Growers' Council of the States of Washington, Oregon, Idaho and Montana, through its board of control and executive committee."

**A New Two-Box Apple Crate**

Mr. Paulhamus is carrying with him a new apple crate, which will hold two boxes. It is claimed that by using this crate the cost will be 25 cents less than two boxes of apples packed in the usual manner. It is believed that this box will be adopted for marketing our C grade and cheaper varieties, and will be the strongest factor that can be introduced for low grades and cheap varieties in competition with barrel apples. The crates are made of veneer. They are made open, so they can be nested one inside of another. In this package the apples will be packed jumble pack and can be put up without being graded for size or wrapped with paper. This method of packing, it is considered, will be satisfactory for low grade apples and save considerable in the packing cost. It is estimated that the crate will cost about 15 cents. Two apple boxes cost 20 cents; this would save 5 cents. Two cents saved in the cost of making, 4 cents in freight, 9 cents in packing, 5 cents in paper, 1 cent in nails, making a total of 26 cents saved.

LESLIE BUTLER, President  
TRUMAN BUTLER, Vice President  
C. H. VAUGHAN, Cashier

Established 1900

# Butler Banking Company

HOOD RIVER, OREGON

Capital . . . . . \$100,000.00

4% Interest Paid in our Savings Department

WE GIVE SPECIAL ATTENTION TO GOOD FARM LOANS

If you have money to loan we will find you good real estate security, or if you want to borrow we can place your application in good hands, and we make no charge for this service.

THE OLDEST BANK IN HOOD RIVER VALLEY

# LADD & TILTON BANK

Established 1859

Oldest Bank on the Pacific Coast

PORTLAND, OREGON

Capital . . . . . \$1,000,000.00

Surplus . . . . . 1,000,000.00

Officers:

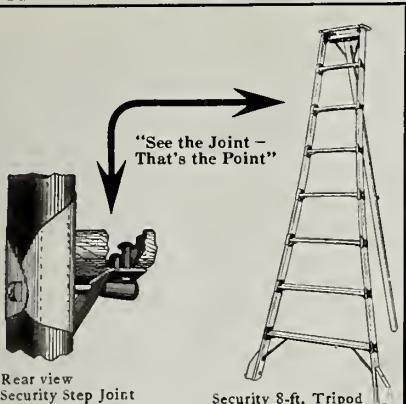
W. M. Ladd, President  
Edward Cunningham, Vice President  
W. H. Dunckley, Cashier

R. S. Howard, Jr., Assistant Cashier  
J. W. Ladd, Assistant Cashier  
Walter M. Cook, Assistant Cashier

INTEREST PAID ON TIME DEPOSITS AND SAVINGS ACCOUNTS

Accounts of banks, firms, corporations and individuals solicited. Travelers' checks for sale, and drafts issued available in all countries of Europe.

In the March edition the names of some of the delegates to the Tacoma Convention were omitted, which are as follows: J. A. Gellatley, Wenatchee; A. J. Olive, Wenatchee; W. N. Mears, Okanogan; Wm. Hayden, Wenatchee; Wm. Yost, Meridian, Idaho; L. C. Titchell, Cashmere, and J. A. Warman, Peshastin.



## SECURITY ORCHARD LADDERS

### YOUR PROBLEM

—to readily replace worn-out steps in your orchard ladders without weakening the sides or losing the rigidity so necessary to the user's safety and efficiency.

### YOUR ANSWER

—is ready if you are one of the 4500 growers in 89 Coast fruit sections who use Security ladders, equipped with Security steel step-joints. These growers, scattered over four states, saw that the additional first cost of the Security would be returned to them, with interest, in the form of better and longer service. Their neighbors are buying Securities now.

**ILLUSTRATED** Furnishes all the details—**1915 BOOKLET** length, width, weight, price and name of the nearest of the 89 dealers.

**J. B. PATTERSON**

82 Franklin Street  
OAKLAND

517 Union Oil Building  
LOS ANGELES

## Position Wanted as Companion to a Lady of Refinement

Clever needle woman,  
will take entire charge of  
wardrobe and household sewing. References.

Box HL care Better Fruit.

**Healthy Trees Perfect Apples**  
when you spray with  
**"SCALECIDE"**

—the spray that's endorsed the country over as "The one great dormant spray." Mixed 1 to 15, it kills every scale it reaches or you get your money back. Guarantee with every package. It's easily prepared, non-corrosive and non-clogging. 1bbl. equals 3bbls. lime sulphur. Destroys eggs, larvae and fungi in dormant state. Simple, safe, economical. Send for free booklet, "Scalecide, the Tree Saver." Write today, to Dept. D

**B. G. PRATT CO.**  
50 Church St., New York City

**PORLAND SEED COMPANY**  
PORTLAND, OREGON  
Northwestern Agents  
**Pratt's "Scalecide"**  
Orders and inquiries will have prompt attention.

WHEN WRITING ADVERTISERS MENTION BETTER FRUIT

### Fruit Pools in the Yakima

The Yakima County Horticultural Union has closed a number of pools on different varieties of fruits, which will be read by the fruit growers in other districts with much interest. The pools on winter apples have not yet been closed, but the prices realized on early fall apples and other varieties of fruits, as indicated in a report rendered, which is given below, will prove interesting. Prices realized, net to the union, and the tonnage handled were:

Peaches—219,764 boxes, all varieties....	\$0.2777
Bartlett Pears—28,217 boxes Fancy.....	.8908
9,276 boxes "C" grade .....	.53
37,193 boxes average .....	.8007
Apricots—10,288 boxes .....	.69
Tragedy Prunes—7,716 boxes .....	.85
Clapp's Favorite Pears—689 boxes Fancy	.84
17 boxes "C" grade.....	.57
Flemish Beauty Pears—918 boxes Fancy	.80
326 boxes "C" grade.....	.61
Clairneau Pears—189 boxes Fancy.....	.955
172 boxes "C" grade.....	.79
Fall Butter Pears—445 boxes Fancy.....	1.00
94 boxes "C" grade.....	.75
Anjou Pears—118 boxes Extra Fancy.....	1.79
500 boxes Fancy .....	1.55
273 boxes "C" grade.....	1.28
Winter Nelis Pears—8,987 boxes Fancy.....	1.05
775 boxes "C" grade.....	.80
Transcendent Crabs—3,080 (pear) boxes	.96
Hyslop Crabs—472 boxes .....	.80
Jonathans—18,152 boxes Extra Fancy,	
4 and 4½.....	.83
14,132 boxes Fancy, 4, 4½ and 5.....	.66
6,537 boxes "C," 4, 4½ and 5.....	.52
General average .....	.725
Grimes Golden—5,136 boxes Extra Fancy,	
4 and 4½.....	.67
1,632 boxes Fancy, 4, 4½ and 5.....	.57
2,880 boxes "C," 4, 4½ and 5.....	.50
General average .....	.60
Fall Apples, assorted varieties — 16,484	
boxes Extra Fancy and Fancy, 4, 4½	
and 5 tier .....	.70
"C" Grade Apples — 33,184 boxes, all	
varieties and sizes .....	.57

The union's handling charges are 10 cents per box on apples and pears and 5 cents per box on peaches, apricots, prunes, etc., which must be deducted from the foregoing prices to ascertain the prices net to the grower.

### All Farm Products Low, As Well As Apples, Except Wheat and Meat

The following crop report was issued by the government in February: While it has not put any extra dollars in the pockets of the apple growers for the crop that has been sold at extremely low prices, it will at least assure them that the apple grower is not the only kind of farmer who has had his troubles this year. The report is very interesting and shows the gradual decline in prices of farm products on the articles mentioned, such as apples, cabbage, potatoes, hay, cotton and horses. It is well worth studying, and careful comparison and observation should be made. From the government report it is evident that something is wrong with farming conditions or the methods of marketing the farmers' and fruit growers' crops. It is up to the fruit growers and farmers to study the situation and solve the problem. The following are the average prices for different products of the farm for the years 1910 to 1914:

On December 15—Apples, per bushel: 1914, 67c; 1913, \$1.04; 1912, 73c; 1911, 86c; 1910, \$1. Cabbage, per cwt.: 1914, \$1.26; 1913, \$1.75; 1912, \$1.45; 1911, \$1.83; 1910, \$1.41. Horses, per head:

Once Grown Always Grown

## Maule's Seeds

Endorsed by more than 450,000 progressive gardeners as the best ever. Our new Seed Catalogue contains everything good in seeds, bulbs, small fruits and plants. 750 illustrations; 176 pages. Free to any one sending us a request for it. Send for it today.

**WM. HENRY MAULE, Inc.**  
2178 Arch Street Philadelphia, Pa.

**Send 10 cents, mention this paper, we will enclose in the catalogue a packet of the above GIANT pansy.**

## Expert Horticulturist

Open for Engagement

College training; executive ability; wide practical experience; satisfactory references.

**HORACE J. SIMONS**  
Worthington, Ohio



## Arsenate of Lead

The widely increasing demand for our unsurpassed product shows that quality is now properly appreciated by the expert grower. The high standard of 16% Arsenic Oxide, together with great body or covering power, will be rigidly maintained in all of our shipments.

**ARSENATE OF LEAD**  
Paste and Powdered.

**BORDEAUX MIXTURE**  
Paste and Powdered.

**CAL-ARSENATE**  
(Pure Calcium Arsenate)  
Paste and Powdered.

**Riches, Piver & Co.**  
NEW YORK

Apple Growers' Association  
Hood River, Oregon

Pfaff, Francies & Page  
Wenatchee, Washington

WHEN WRITING ADVERTISERS MENTION BETTER FRUIT



## The New Era Auto-Irrigator—Works While You Sleep

The thing you have been looking for—something which will distribute your water into furrows with a uniform rate of flow and not require your continued attention. It has been thoroughly tested for two years and its users speak in enthusiastic praise of its work. The more rough and more difficult your land is to irrigate the more the advantages of this irrigating device appear. It consists of a canvas hose with apertures along one side, spaced about 20 inches apart, from which the water escapes into the furrows. These apertures are fitted with a regulating device to regulate or stop the flow of water. The hose is tapering in form to conform to the gradually diminishing volume of water. The standard size is 75 feet long and 6 inches in diameter at large end, and tapers to  $1\frac{1}{2}$  inches diameter at small end, which is open. It has a capacity of about one-half cubic foot of water per second when the water in the ditch is raised about 8 inches above the level of the land. This will require that your ditch banks be thrown up a little higher than they generally are at present. The hose is easily and quickly set in operation by connecting it with a pipe set into the ditch bank. The end of pipe in the ditch has a cylindrical screen fitted over it to prevent the entrance of leaves, etc. The hose is light and when one strip of land is irrigated it is easily carried to the next strip. Where more than one hose is needed they can be used in a series, according to the number needed. This device will pay for itself in two months' use or less, besides saving from 20% to 50% in your water and producing better crops by the uniform application of water, and also preventing your land from washing. For fuller details send for descriptive circular. Will make a special discount on the first five Irrigators bought and used in any community. We desire implement dealers to sell this great labor and water-saving device in every town, or agents to demonstrate and sell it. Good money for live men. Can be mailed anywhere in the United States by parcel post.

For particulars and prices address

**THE AUTO-IRRIGATOR MFG. CO., Box 609, Denver, Col.**

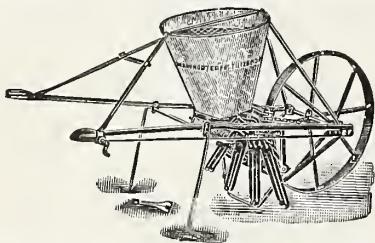
## A "SURE THING" INVESTMENT FOR THE FARM

There is no element of chance about using good fertilizer. The question for you to decide today is "What Fertilizer to Use."

For many years, orchardists and growers of various kinds of crops have found the special mixtures of

## DIAMOND FERTILIZER

to be reliable and satisfactory because they are honestly made, and sold on the basis of a correct analysis of available elements.



### FREE FERTILIZER BOOKLET

will give you a better idea of the kinds of fertilizer we make and the various blends we supply. Ask for Booklet 205.

### McWHORTER FERTILIZER DRILL

For the simple, superior distribution of Commercial Fertilizers. Well made, easily operated.

Ask for our general catalog No. 205 for complete description of this economical, low-priced drill, which you will find an immense saving to you. It not only prevents waste of fertilizer, but insures even distribution at the greatest speed.

**PORLTAND SEED COMPANY**  
PORTLAND, OREGON



1914, \$130; 1913, \$135; 1912, \$139; 1911, \$134; 1910, \$141.

On January 15—Potatoes, per bushel: 1914, 49.7c; 1913, 68.4c; 1912, 50.6c; 1911, 84.5c; 1910, 54.1c. Hay, per ton: 1914, \$11.29; 1913, \$12.42; 1912, \$11.86; 1911, \$14.85; 1910, \$12.24. Cotton, per pound: 1914, 6.6c; 1913, 11.7c; 1912, 12.2c; 1911, 8.4c; 1910, 14.4c.

Prices paid for apples per bushel to producers in various sections of the United States on December 15 during the years 1914 and 1913 are as follows: Northwest (average),  $77\frac{1}{2}$ c and \$1.10; New York, 50c and 97c; Virginia, 50c and 93c; Michigan, 55c and 85c.

### British Columbia Fruit Growers

The British Columbia Fruit Growers' Association held its annual meeting in Agricultural Convention Hall, in the Parliament building at Victoria, January 26. The meeting was largely attended and the addresses received with enthusiasm. Many subjects were discussed by the fruit growers who were present. The membership has reached the grand total of 876. In addition to the fruit growers' problems, Mr. F. W. Peters was called on, who gave a very intelligent address in reference to transportation matters. With true British pride the fruit growers of British Columbia gave Sir Richard McBride an enthusiastic welcome when he appeared before the meeting to address that body. In his speech he assured all of the members that the government would give its most earnest attention to the various problems connected with the fruit industry of British Columbia with a view to bettering their condition in every way possible.

### North Pacific Fruit Distributors Cuts Salaries

Announcement has been made that the trustees of the North Pacific Fruit Distributors has made a sweeping reduction in salaries from top to bottom of 20 per cent. When it was found that the income from the tonnage was not sufficient to pay the overhead expenses and salaries of the officials and employes for the years 1914-15 the trustees decided to reduce expenses in order to meet the situation by reducing every possible expense and cutting salaries. This is a move in the right direction and such a step will certainly be appreciated by the many fruit growers who are shipping through this organization. The grower has troubles with his own expenses and low prices and therefore has been compelled to economize in every way possible, consequently it will afford the grower considerable satisfaction to know that the marketing concerns are endeavoring to economize.

The twenty-fourth annual report of the Experiment Station of Washington State College, Pullman, issued by the director, is very instructive, interesting and original. It is a testimonial indicating the excellent work and proceedings on the part of the Station.

## Buy It Now

Say,  
Do you remember when you were  
a kid,  
How they used to tell you  
About throwing a pebble into a pond.  
And how it made a ripple  
That went on, and on, and on, and on  
Until it reached the distant shore,  
Or something like that?  
And when you got big enough  
You went to the minstrel show  
And saw the end man  
And the middle man  
Show how a quarter of a dollar  
Paid off ten dollars' worth of debts  
In about five minutes,  
By passing from Tambo to Bones,  
And from Bones to Rastus,  
And from Rastus to Ephraim  
And from Ephraim to Lijah,  
And so on around the half circle?  
And then, when you were sent up  
To college,  
The high-brow Professor  
Tried to explain the same thing?  
You remember?  
Well,  
This is no talk on Political Economy  
Or anything like that;  
It's just a gentle hint  
To the effect that Right Now  
Is a good time for you  
To start a little ripple of your own,  
A good time  
To start your dollars  
Moving around the circle.  
Pay off your debts.  
Buy what you need,  
And buy it now.  
Get things started.  
Put money in circulation.  
That's good sense,  
And patriotism,  
And good business.  
Every ripple in the pond,  
No matter how small,  
Helps break the stagnation.  
Get busy  
And make a splash.  
"Buy it now"  
And get your money back.

—Marco Morrow in the Topeka Daily Capital.

## Yakima to Have a Cannery

The American-Hawaiian Fruit Canning Company, it is stated, will let the contract for a building 80x100 feet, to cost about \$10,000, and having a capacity of 2,000 cases per day. This announcement has been made by Mr. Frank P. Zelt. It is stated that Mr. Zelt will remain in North Yakima for the purpose of superintending the construction and preparing the plant for active operation. In addition to canning fruit it is stated that the cannery will put up many kinds of vegetables, such as asparagus, rhubarb, beans, pumpkin, peas, corn and spinach, and also all kinds of small fruits. Mr. Zelt, who was formerly an employe of the California Fruit Canners' Association, has spent thirty years in the canning and preserving business. It is generally understood he will take the management in connection with the cannery.

*Let us furnish you estimates  
on your*

# Fruit Labels

DISTINCTIVE AND ARTISTIC DESIGNS FURNISHED  
**THE SIMPSON & DOELLER COMPANY**  
NORTHWESTERN BANK BLDG.  
E. SHELLEY MORGAN, N.W. MANAGER. PORLAND, OREGON.

## SIGN UP

*Mr. Grower:***If you think—**

all sellers will make the same returns beginning with the 1915 crop, or it makes no difference who or which sells your fruit hereafter—

**you may be sorry.**

The Growers' Council is not going to make efficient sellers out of weak ones. It is simply going to make it plainer than ever before which are weak and which are strong. It's up to you to help the situation. Prove yourself a true co-operator by selecting a reliable selling agency and signing up your crop early. Do it now!

**Northwestern Fruit Exchange**  
Stuart Building, SEATTLE, WASH.

**Kirstin One Man Stump Pullers Cost Less**



Get my special low prices and free catalogue before buying a puller. Six models from \$37 up. Write at once to

A. J. KIRSTIN CO.  
231 Commercial St., Salem, Or.

LIVE AGENTS WANTED EVERYWHERE. APPLY NOW.

**There's \$ Dollars \$ Under Your Stumps**

**PORTLAND, OREGON**  
**PORTLAND HOTEL**

The hotel which made Portland, Oregon, famous  
Most Desirably Located. In the Center of Shopping and Theatre District  
Covers a City Block

**Broadway, Sixth, Morrison and Yamhill Streets**

**EUROPEAN PLAN—\$1.00 per day and upward**

Write for Portland Hotel Booklet

Geo. C. Ober, Manager

## Oreenco Prune Trees Cheap

Myrtle Creek, Oregon, November 26, 1914.

I feel like saying a few words to you on paper in regard to my Italian Prune trees. I am more than pleased with them. Really they are better than I expected. I cannot speak too much in praise of your company for such good trees. They are of good size, good height and good roots. Everyone that I talked with that ordered from you is well pleased.

(Signed) J. A. Copeland.

"ORENCO TREES" are universally known for their high standard of quality, and particular planters prefer to buy where they can depend upon quality, reliability and satisfaction. When you want really good trees at right prices, you can't do better than with us. Try it.

### Oregon Nursery Company

ORENCO, OREGON

SUCCESSFUL salesmen wanted.

It is also stated that it is the intention of the company to operate an evaporator for the purpose of evaporating apples.

#### Bordeaux Mixture

Peach leaf curl may be controlled by spraying at the right time of year. Bor-

## BETTER FRUIT

deaux mixture (6-6-50) is the best spray to use, but if scale or peach twig miner are present, commercial lime-sulphur (1-12) is recommended. The right time of year for application is while the buds are swelling, but before any of the tender green leaf tips begin to emerge. It is better to spray early than even a few days late. About the last of February or the first of March will be about right in the Willamette Valley. The spray must be applied so as to cover all the buds thoroughly. This will require an outfit giving good pressure. A good nozzle is necessary and a great deal of care must be observed. If the job is well done, however, and at the right time, the leaf curl will be eradicated. Failure will probably come if the recommendations regarding time and method of application given above are not rigidly adhered to.

The Oregon Agricultural College, Corvallis, have issued a very interesting and complete bulletin, which is "A Report of the Hood River Branch Experiment Station." The same can be obtained on application by addressing "The Director of the Experiment Station, Corvallis, Ore."

**LILLY'S  
SEEDS**

Lilly's Seeds are not an experiment—they are tested in our laboratory and trial grounds. They are specially adapted to the Pacific Northwest and are true to name. Our valuable catalogue will be sent free on request. Dealers sell Lilly's Seeds. If not, write.

The Chas. H. Lilly Co., Seattle

## Build a Better Home for Less—

Do away with all middlemen's profits—I can cut the cost of your architect, contractor and retail lumber dealer's profit by my

### New System of Ready Cut Houses

The houses that come to you cut to fit—ready to put together, with full instructions—an intelligent boy can build one.

Write for my FREE BOOK No. 16.

**J. BRYSON MOORE**

1020 Northwestern Bank Bldg.

PORLAND, OREGON



This 4-Room House Cost \$394.24

## Fruit Growers Profit by Dairying—

Hundreds of fruit growers are turning to dairying as the most profitable side line. Oregon's dairy products last year exceeded \$18,000,000.00.

Even if you have only a few cows, our Service Department can give you valuable ideas and assistance. We carry the most complete line of Dairy Supplies in the Northwest.—Sole Oregon agents for



Simplex Separators

Buhl Milk Cans

Entire Simplex Line

Papek Ensilage

Cutters



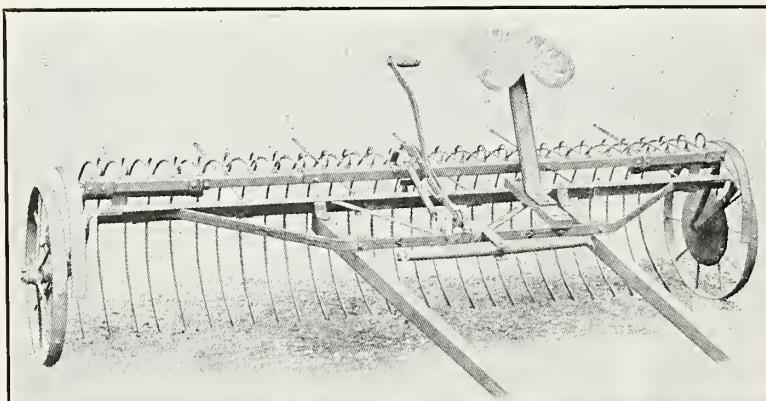
Inspect our modern dairy equipment.

### Free Catalogs

gladly sent upon request.

**MONROE & CRISELL**  
MANUFACTURERS TO RETAILERS AND EXPORTERS  
**The Simplex Line**  
DAIRY CREAMERY AND CHEESE FACTORY MACHINERY AND SUPPLIES  
143 FRONT STREET, PORTLAND, OREGON

**P & O**



## The New Low-Down Orchard Rake

*The Only Rake that Rakes Under Bearing Trees*

DESIGNED for the harvesting of cover crops in the orchard, this implement should be investigated by you. See it at any P. & O. Agency or write to us for descriptive literature.

Built so low that the branches will be free from interference; driver's seat at one side, well out of the way; rake 9 feet long, allowing of good sweep under trees; strong enough for heavy alfalfa and clover crops; made of steel and malleable; wheels 26 inches in diameter, provided with shields to prevent branches catching between axle and wheels; also shields in body of the wheels, to prevent hay from falling into wheels; hand lift, provided with spring of proper tension to raise teeth easily.

Designed by a practical orchardist and sold at a price which enables it to pay for itself in tree damage, time and hay saved. Write for Circular 10.

Since 1842, the name of PARLIN & ORENDOFF PLOW COMPANY has stood for good implements, honestly made. Through our many agents, we insure you good service, wherever you are.

**PARLIN & ORENDOFF PLOW COMPANY**  
OF PORTLAND, OREGON  
Agents throughout the Northwest

**Practical PUMPS**

**Permanent** — 300 styles — one for every purpose; hand, power, single-acting, double-acting, force, lift; for shallow wells, deep wells, cisterns, etc. Backed by 65 years pumpmaking experience.

Our service Department helps you select right pump or system — free. Our free book, "Water Supply for the Country Home" fully describes.

**GOULD'S RELIABLE PUMPS**

— simple, durable, efficient. Send for your free copy today.

The Goulds Mfg. Co., Main Office & Works Seneca Falls, N.Y.  
BRANCHES:  
New York  
Boston  
Chicago  
Houston  
Atlanta

**YAKIMA GROWN**  
is the Best Guarantee

**TREES**  
Fruit and Ornamental  
**ROSES, SHRUBBERY, Etc.**  
Send for Catalog and Prices

**Yakima & Columbia River**  
**Nursery Co.** North Yakima Washington

**Ideal Gopher Trap**

Only Trap guaranteed to catch large or small gopher. Being round with thin edges gopher walks into trap before detecting anything in runway. Positive grip. Jaws always hold. 100 per cent efficient—catches gopher every time. Far safer and surer than poisons or gas. Farmers say it's worth dozen other makes. **Price 50c.** If your dealer can't supply you, will be sent postpaid on receipt of 60c, two traps for \$1.10; six for \$3.00. Money back if not satisfied.

**E. J. CHUBBUCK CO.**  
Dept. C  
731 Market Street SAN FRANCISCO, CAL.

**Automatic Anti-Frost Alarm**

Infallible; accurate; better and ten times cheaper than an alarm thermometer. Will give the fruit grower a timely warning of approaching frost. Can be set to ring bell at any temperature desired.

**Price \$4.00 complete.**

**THE ANTI-FROST STOVE CO.**  
621 Main Street, CINCINNATI, OHIO

### The Value of a Cannery Pay Roll

It is stated that the pay roll of the Northern Pacific car shops in the city of Tacoma during the biggest month in 1914 was \$68,000. The Puyallup-Sumner cannery, under the management of Mr. W. H. Paulhamus, had a pay roll of \$238,000 during the biggest month of the season of 1914. Every fruit district ought to have a cannery. The pay roll would be a big factor in the prosperity of every fruit growing community. It would help all kinds of business and afford employment for many people, giving them an opportunity to earn extra money during the canning season. Every fruit growing section ought to have a cannery, evaporator, vinegar plant or cider mill. Some fruit sections ought to have all of these, and our comment is that it is too bad that each district in addition cannot have Paulhamus to manage its cannery.

### Adopts New Organization Plan

At the annual meeting of the Wenatchee Valley Fruit Growers' Association, after the Seattle Convention, the plan of the Fruit Growers' Council as originally outlined at Seattle was presented to the meeting and was received with such satisfaction that it was endorsed by this association. This speaks well for the new movement. If the Wenatchee Valley Fruit Growers' Association was so well satisfied with the Seattle plan as to adopt it they will be much better satisfied with the Tacoma plan, which without question means its adoption by this association.

### The Western Fruit Jobbers

The eleventh annual convention of the Western Fruit Jobbers, held in Los Angeles the third week in February, was the most successful and the largest meeting ever held by this organization. Memphis, Tennessee, was selected as the next convention city. The entertainment committee of Los Angeles spent \$25,000 in entertaining the Western Fruit Jobbers' Association.

### Orange Growers Get Low Prices

It is stated that orange growers have been hit hard, if not harder than the apple growers of the Northwest, by low prices. Orange growers in Florida who refused 60 cents per box on the trees, is it stated, now are unable to obtain 30 cents. One Florida grower made a consignment of 206 boxes, for which he received \$15.50. He figures his actual loss on the shipment at \$134.50.

"The railroad is our common high road; it is not a luxury; it is not a concern in which the farmer and the manufacturer alone are interested; it is an essential to the commercial life of our people, almost as necessary as the land itself. If we have too few railroads, giving meager service and following the false policy of exacting high tolls, the nation's growth will be by so much retarded."—Hon. Franklin K. Lane, Secretary of the Interior.

BY ORDER OF ROYAL WARRANT  
S.M.A. GEORGE V

**SEEDS** Write  
for Catalog "B"  
**CARTER'S TESTED SEEDS, Inc.**  
**DEAN BALLARD, Mgr.**  
3000 Arcade Building **SEATTLE**

**I'LL SHIP YOU THIS**

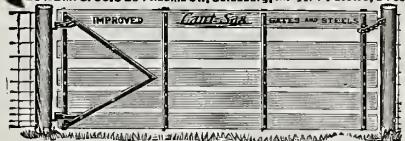
**"Cant-Sag"**

### Gate On 30 Days' Trial

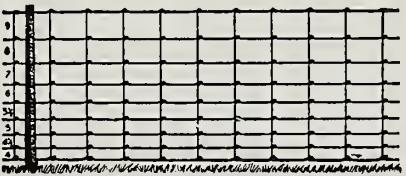
I prove the value of my "CANT-SAG" Gates before you pay. I want you to see for yourself that they can't sag, and that you can't buy or make a better gate no matter what material you use. My gates are

**Guaranteed For 5 Years**  
cost less—last three times as long as iron, wood, or stone. They are complete, ready to hang, or you can buy just the Gate Steels, hinges, bolts, etc. and make your own gates and save money. Write now for free Catalog and prices.

BOWE MFG. CO. 5409 Adams St., Galesburg, Ill. A. V. Rowe, Pres.



### DIRECT TO CONSUMER



### 39-INCH FENCE 28 CENTS

Made of high-grade galvanized wire. Write for catalog and prices  
**NATIONAL FENCE COMPANY**  
Columbia and Water Sts. PORTLAND, ORE.

**BOOK ON DOG DISEASES And How to Feed**  
Mailed free to any address by the Author  
**H. CLAY GLOVER, V. S.**  
118 West 31st Street, New York

### Portland Wholesale Nursery Company

Rooms 301-302 Stock Exchange Building  
Corner Third and Yamhill Streets  
PORTLAND, OREGON

### W.vanDiem

Lange Franken Straat 45, 47, 49, 51, 61  
ROTTERDAM, HOLLAND

European Receivers of American Fruits

Eldest and First-Class House in this Branch

Cable Address: W. Vandiem  
A B C Code used; 5th Edition

Our Specialties are

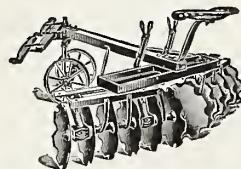
**Apples, Pears, Navel Oranges**

**White Salmon Valley Fruit Growers' Union**

At their annual meeting the White Salmon Valley Fruit Growers' Union elected Mr. A. B. Groshong president, Mr. F. S. Baker vice president and Mr. F. O. Charles secretary. The other members on the board are Mr. John B. Humphrey, Mr. R. Burdick and Mr. H. C. Lowden.

**Puyallup and Sumner Fruit Growers' Association**

Under the management of Mr. W. H. Paulhamus the Puyallup and Sumner Fruit Growers' Association put up an output in the cannery of fourteen train-loads of twenty cars each. When Mr. Paulhamus started the association had a capital of \$2,500. There is now a surplus of \$100,000.



Those farmers who make careful and intelligent study of tillage methods know that they can pulverize their soil finer, cover more acres, and make more money by using

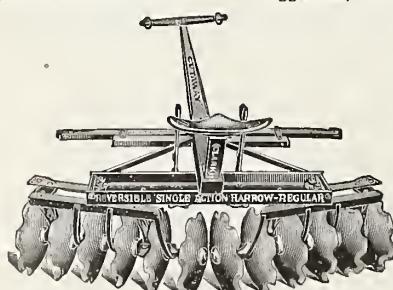
## Cutaway (CLARK)

### Disk Harrows and Plows

If you have not yet obtained the facts about CUTAWAY (CLARK) tools, go at once to your dealer and ask him about them. If he doesn't sell CUTAWAY (CLARK) farm implements write us for catalog and prices. We ship direct where we have no agent. In our catalog you will find just the style machine for your needs—and more—you'll find just the size for the power you have. It seldom costs you more to buy a CUTAWAY (CLARK) machine—a machine especially built for intensive tillage—than it does to buy an ordinary tool.

If your dealer doesn't have in stock what you want he or you can get it quick from the factory

**THE CUTAWAY HARROW COMPANY**  
Maker of the original CLARK disk harrows and plows  
940 Main Street  
Higganum, Conn.



## BETTER FRUIT

### IT PAYS TO SPRAY MYERS WAY

Take care of your fruit trees—They are a wonderful source of profit—Every tree in your yard or orchard should pay dividends in perfect fruit through protection by spraying MYERS WAY

**MYERS SPRAY PUMPS**

Bucket, Barrel and Power, and Nozzles and Accessories are all proven and cover every spraying need—A Pioneer Line of Standard Pumps—guaranteed for effective spraying, and equally serviceable for whitewashing, disinfecting, rinkling, fighting fires, etc.

Send 10¢ for our free catalog "How to Spray" which gives late Spray Calendar with instructions How and When to Spray. Your copy is waiting—write today for it and ask for name of our dealer.

F. E. MYERS & BRO. 120 Orange St. ASHLAND, OHIO

PUMPS—HAY TOOLS—DOOR-HANGERS

Red Crown has lots of "pep" but burns clean.

# RED CROWN

*the Gasoline of Quality*

is refinery gasoline—every drop. It's the best gasoline the Standard Oil Company can make. Dealers everywhere.

STANDARD OIL COMPANY  
(California)  
Portland

## Burpee's Seeds Grow

THE truth of this famous slogan is proved by thousands of pleased and permanent customers. The Burpee Idea of Quality First—"to give rather than to get all that is possible"—combined with efficient service, has built the world's greatest mail order seed business. We deliver seeds free by parcel post, and have not advanced prices because of the war. Write today for Burpee's Annual, the "Leading American Seed Catalog" for 1915. It is mailed free.

W. ATLEE BURPEE & CO., Burpee Buildings, Philadelphia

## Round Trip Fares Reduced to the Two World Expositions

At San Francisco and San Diego, which permit stop-overs at all points in either direction, are now on sale at greatly reduced rates via the

### Scenic Shasta Route

Three Fine Trains Daily

## Stop-Overs on One-Way Tickets

Ten days' stop-over will be allowed at San Francisco and Los Angeles on one-way tickets sold to Eastern Cities when routed via the Southern Pacific.

### "California and It's Two World Expositions"

A new booklet describing the trip from Portland to San Diego including the two Expositions, the scenic beauties of Oregon, the Siskiyous, Shasta Mountains, San Francisco, the beach and outing resorts of California. Free on application to nearest Agent.

## SOUTHERN PACIFIC

John M. Scott, General Passenger Agent, Portland, Oregon

**"WE STARTED RIGHT  
AND WE ARE RIGHT"**

**6458 Acres**  
IN OUR ENTERPRISE  
**4178 Acres**  
ALL IN APPLES

Nine miles continuous rows of trees, the largest apple orchard ever planted.

All are one, two and three years old, the two and three year old all sold, amounting to over 3,000 acres.

We are now offering our one year at terms to suit you.

We give five years', from date of planting, free care. Our company is unlike others in the feature of staying with our purchasers after the free care period. Our plans make our interests mutual; we all work together for the interest of all.

Our Booklet will give you a simple statement of our dealings and methods. Write us for information.

**DUFUR ORCHARD COMPANY**

Northwestern Bank Building  
Portland, Oregon

**The  
First  
National  
Bank**

Hood River, Oregon

**Capital and Surplus  
\$135,000**

**4% Interest Paid on Savings  
and Term Deposits**

**F. S. STANLEY, President  
E. O. BLANCHAR, Cashier**

## Annual Report of the Puyallup and Sumner Fruit Growers' Association

The Puyallup and Sumner Fruit Growers' Association was incorporated under the laws of the State of Washington March 22, 1902, with a capital stock of \$2,000. It is conducted entirely along co-operative lines, with a membership of more than 1,600 hundred growers, and has canneries with a floor space of more than 125,000 square feet at both Puyallup and Sumner, in the Puyallup Valley, Washington, between Seattle and Tacoma, on the main lines of the Northern Pacific, Great Northern, Chicago, Milwaukee & St. Paul and Oregon-Washington railways. Financial condition at close of business December 31, 1914, was as follows:

Capital stock .....	\$ 2,503.00
Surplus December 31, 1913.....	\$ 79,004.57
Net earnings during 1914.....	25,406.93
Surplus December 31, 1914.....	\$104,411.50
*Less depreciation on equipment account authorized by Directors.....	4,411.50

Leaving net surplus December 31, 1914..... **100,000.00**

Capital and surplus December 31, 1914..... **\$102,503.00**

Fire insurance (in best companies).....	\$288,500.00
Accident insurance, covering boiler accidents.....	25,000.00

### FINANCIAL STATEMENT

Cash on hand January 1, 1914.....	\$ 23,910.31
Total cash receipts year 1914.....	1,128,676.12

Total checks issued year 1914.....	\$1,152,586.43
	1,123,684.78

Cash on hand January 1, 1915.....	\$ 28,901.65
Total receipts shown above do not include transportation paid on shipments at receiving end, estimated at \$200,000, making a total year's business of considerably over \$1,300,000.	

### ASSETS

Cash in banks.....	\$ 28,641.37
Cash in office.....	260.28
Accounts receivable .....	50,920.56

About \$34,000 of the above total is covered by sights drafts against bills of lading on canned goods en route.

Merchandise, consisting of corn, wheat, oats, hay, bran, shorts, flour, etc..	19,121.48
Fruits in cans and barrels, part of which is sold but undelivered, including also empty cans, cases, barrels, labels, etc.....	156,594.99

Total liquid assets.....	\$255,538.68
Puyallup cannery plant.....	\$47,079.10
Machinery and equipment, Puyallup.....	15,606.81

Total Puyallup plant.....	62,685.91
---------------------------	-----------

Summer cannery plant.....	\$12,718.92
Machinery and equipment, Summer.....	5,361.13

Total Sumner plant.....	18,080.05
-------------------------	-----------

Feed store equipment, Puyallup.....	\$2,209.66
Feed store equipment, Summer.....	630.93

Total equipment, both stores.....	2,840.59
-----------------------------------	----------

Insurance paid in advance.....	1,875.80
--------------------------------	----------

Total assets .....	\$341,021.03
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LIABILITIES	
Money borrowed from banks.....	\$60,000.00
Deposits of members.....	68,548.59
Accounts payable .....	15,216.03
Express certificates .....	666.08
Interest accrued and unpaid.....	2,412.28

Total liquid liabilities.....	\$146,842.98
-------------------------------	--------------

Capital .....	\$ 2,503.00
Surplus, December 31, 1913.....	\$79,004.57
Net earnings, 1914.....	25,406.93 104,411.50

†Total capital and surplus.....	106,914.50
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Estimated disbursements to members when all goods are sold.....	87,263.55
---	-----------

Total liabilities .....	\$341,021.03
-------------------------	--------------

SUMMARY	
Liquid assets .....	\$255,538.68
Liquid liabilities .....	146,842.98

Liquid assets in excess of liabilities.....	\$108,695.70
---	--------------

Liquid liabilities .....	\$146,842.98
Cash on hand.....	28,901.65

Showing 20% of liquid liabilities on hand in cash, equal to bank requirements.

\*The Directors voted to charge off to depreciation from equipment account sum of \$4,411.50, leaving a net surplus of \$100,000.

†From the surplus shown must be deducted the undetermined earnings due H. A. Baker in the barrel department for the years 1912 and 1913, based upon the profits derived from fruit in barrels when all is sold, which the books show to be nothing.

Stark Bros. Nursery of Louisiana, Missouri, is mailing out its new catalog, which is very attractive, showing a cut on the cover of the Delicious apple.

The California State Committee of Horticulture is mailing out a very interesting and instructive booklet on "Apple Growing in California."

## HAMILTON MADE SPRAYING HOSE

WILL SPRAY YOUR TREES FOR SEVERAL YEARS FOR

### ONE COST

$\frac{1}{2}$ -inch Perfect Spray Hose, 6 ply, 50-foot pieces coupled, or  $\frac{1}{2}$ -inch STERLINGWORTH Reel Spray Hose in 500-foot lengths.

Either grade will stand 600 lbs. test and will be satisfactory for any power or hand sprayer.

\$15.00 for 100 feet. Cash with order.

Freight paid to your station. Shipped direct from factory the day the order is received.

HAMILTON RUBBER MFG. CO.  
TRENTON, N. J.



## The Truth About Poultry



Get the facts by reading the  
**Western Poultry Guide**

A practical treatise on Western Poultry Culture, written by twelve successful Western poultrymen. Complete in twelve parts, printed in one volume. Real work, with real poultry, on real Western poultry farms. The successful methods of twelve of the greatest poultrymen in this country, told in their own words. What others have done you can do. This book tells how. We offer this book free to any reader of our paper. Here is the way to get it:

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Our paper is handsomely illustrated, practical, progressive and up-to-date. Fifty cents a year, in advance. Three months' trial subscription 10 cents. Sample copy free. Address

**NORTHWEST POULTRY JOURNAL**  
SALEM, OREGON

## Central Selling Agency, Etc.

Continued from page 12

lows: 1. All fruit shall be graded and packed under uniform grading rules and careful and uniform inspection. It is desired and agreed that Extra Fancy, Fancy and C grade, or whatever names used shall have the same meaning in the rules of our respective organizations, and that all fruit to be handled shall reasonably conform thereto. 2. It is agreed that our handling contracts with growers shall be uniform in provisions except as may be mutually satisfactory to all parties hereto. It is understood each organization going into the central selling agency shall finance its own members or clients and render account sales to them direct in the same manner as at present. 3. It is agreed that all fruit shall be handled at an estimated cost per car of not to exceed thirty dollars, and that any surplus accruing shall be rebated to our respective organizations in proportion to the amount and variety of fruit shipped. 4. It is agreed, as a general policy, that the central organization shall handle all fruit as agents for growers, not buying except to fill orders and steady the market. 5. It is understood and desired that each organization shall be equally benefited by the central selling organization and all policies shall be adopted with that end in view."

### Appeal for Co-operation

By W. H. Paulhamus, Chairman of the Northwest By-Products Committee of Ten.

THE development and progress of the fresh-fruit industry is such that there is positive evidence that canneries, evaporators and other by-product factories are not only a necessity but that they will be established in large numbers in the Northwest during the next two years. There is need for many of such institutions in the fruit districts of the Northwest in order to maintain the fruit business on a sound business basis. Unless these plants are controlled most of them will be started wrong and many will be badly managed; many will be organized where there is not sufficient need and the result will be failures with unnecessary loss of money, time and work. If they are not properly organized the markets will be demoralized, and if not properly managed in the selling end of the business low prices will prevail and the injury be serious to the fruit industry. The Northwest By-Product Board believes that its function is just as much to help control the situation as to help communities start plants for the purpose of taking care of their surplus. In this work the by-product committee wishes the help and co-operation of every existing cannery, evaporator, fruit packer or any kind of a plant for any by-products. This by-product industry should be organized as thoroughly as possible for the purpose of establishing standard packs, reasonable, uniform prices and work co-operatively for the purpose of reaching out for new

Every Month in the Year you can use



**Conkey's Poultry Tonic**  
for Young Chicks Growing Stock Molting Fowls and Laying Hens

Vigorous birds grow rapidly, feather up fast, and pay a profit, while weak ones are only an expense.

CONKEY'S gives them health and stamina and keeps the organs keyed up to their best without overacting them.

CONKEY'S WHITE DIARRHEA REMEDY

in the drinking water from the start, may save many of your chicks 25c. and 50c. Send 4c. in stamps for Conkey's Poultry Book. Worth dollars to any poultry owner.

**THE G. E. CONKEY CO.**

111 Conkey Building, Cleveland, O.



Have a CONKEY CORNER in your Poultry House

## HOME CANNERS

All sizes.

Used by U. S. Government Schools, Girls' Clubs, Collaborators and Farmers everywhere. For Catalog and Special Offer, write

ROYAL HOME CANNER CO., DEPT. P., ALBION, ILLINOIS

## SASH & DOORS

### WINDOW TRIM

#### Buy from Factory and Save Money

We operate our own factory and sell direct to the consumer, saving you the retailer's profit. We make prompt shipment anywhere. Quality guaranteed. Window trim, like drawing ..... 80c Inside door trim ..... 60c

Cottage front windows	\$2.50
5-cross-panel doors, 15 sizes .....	1.10
Cottage front doors	2.45
3-ply fir veneer doors	2.00
Craftsman doors	1.50
Outside door frames	1.25
Inside door frames	.75
Window frames	1.00
12-light windows	.95c up
Bungalow sash	.56c up

We save you money on Builders' Supplies.

Write for Catalog Bl.

**O.B.WILLIAMS CO.**

1943 FIRST AVE. SOUTH.  
SEATTLE.

## YOU WANT THE BEST SPRAYER



You want to save time, temper, trouble and trees. You want to raise fruit that brings the highest prices. You want to know all about our sprayer before you buy. There is more you ought to know. Do You Want To Know The Price?

Write for Catalogue #6  
**MATSON MACHINERY CO.**  
Manufacturers 182 Morrison St., Portland, Ore.

markets. When this is done the industry will be stabilized and the committee can work with the fruit-product plants toward helping take care of the surplus of fresh fruit in districts where it would otherwise go to waste. Many districts are probably not ready for plants for the reason that the volume is not sufficient. Through organization this industry can work with the railroads to secure proper rates, both by express and freight, for fruit that will permit assembling of the output from communities where the tonnage is not sufficient to load out in car lots. It is the intention of the committee to help any districts where there is not a volume sufficient for a plant; for the purpose of helping to promote the organizing necessary for the buying and financing of such plants. The committee believes that, with the organization of all existing plants, it can do a great deal toward controlling the situation. The subject of by-products has been discussed with the growers by the by-products committee in several sections and several conferences have been held. It is expected that others will follow in the near future. The committee wishes those who are interested give the matter consideration and express their views fully and frankly, either personally to the members of the by-product committee or by correspondence to the manager, Mr. W. H. Paulhamus, whose address is Puyallup, Washington.

The proceedings of the fourth annual meeting of the California Association of Nurserymen, which was held in San Diego, October 15th, edited and compiled by Henry W. Kruckeberger, is being mailed out to nurserymen.

A. R. Weston & Co., Bridgman, Michigan, kindly sent this office their annual catalog. This catalog is devoted to strawberries, blackberries, dewberries and grapes. The color work on the cover page is very attractive.

Fruitgrowers and alfalfa farmers at this season driven with spring work, hardly finding any day long enough to accomplish even a measure of their pressing tasks connected with orchard and field work, are apt to forget the existence of an active, persistent enemy, sleepless and industrious. The squirrel or gopher, native to the Northwest, is one of the most destructive agents the agriculturist has to contend with. Valuable trees are destroyed, alfalfa fields are often ruined, mounds of earth are raised, which interfere with the cutting, irrigation ditches are undermined and damage amounting to millions of dollars in the aggregate ensues. Every effort should be put forth at this season to destroy them. Guns and traps are effective but expensive, in the time they require. Vaccines or virus are of doubtful effect; an efficient poison, preferably a strichnine-coated grain of reliable make, if placed in the burrows of the pests, will accomplish quicker, better and more effective results than anything else, with the advantage that it can be distributed and safely applied at any hour and in a few moments' time.—[Adv.]

## FORKNER SPRING TOOTH TILLERS WORK RIGHT UP TO YOUR TREES

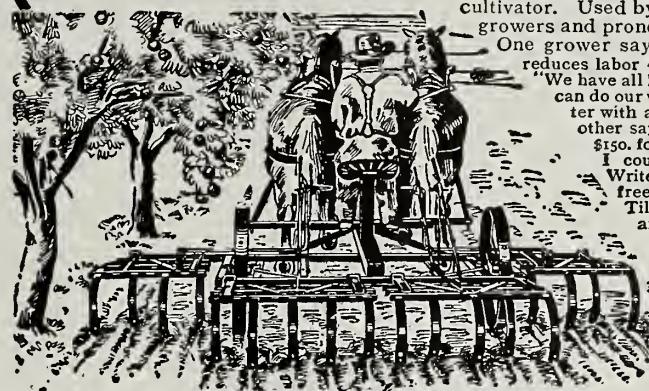
Cultivate entire surface between rows without disturbing boughs or fruit. Does more work—easier and quicker—and leaves better surface mulch than any other cultivator. Used by thousands of fruit growers and pronounced indispensable.

One grower says: "The Forkner reduces labor 40%". Another says: "We have all kinds of tools, but we can do our work quicker and better with a Forkner". Still another says: "I wouldn't take \$150. for my Forkner Tiller if I couldn't get another".

Write today for catalog and free book—"Modern Soil Tillage"—invaluable to any farmer or fruit grower. Mailed free.

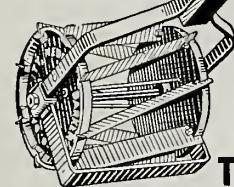
Write today.

**LIGHT DRAFT HARROW CO.**  
601 Nevada St.  
Marshalltown, Ia.



## BARKER "BEST WEED KILLER EVER USED"

WEEDER, MULCHER  
AND CULTIVATOR



The Barker Weeder, Mulcher and Cultivator successfully, in ONE OPERATION, kills weeds and forms a perfect soil mulch

It cuts weeds below the surface, chops them up and spreads them out on top—where they can't grow—to be dried out and turned into plant food. Breaks crust, pulverizes clods, aerates the soil. The REEL KNIVES and STATIONARY BLADE, working in combination, make a loose dust mulch which holds the moisture, forcing plant growth and insuring size and quality. Does more work and better than ten men with hoes. Has shovels for deeper cultivation.

Costs little. Write today for illustrated folder and Special Factory-to-User offer.

**THE BARKER MFG. CO., BOX 112, DAVID CITY, NEBRASKA**

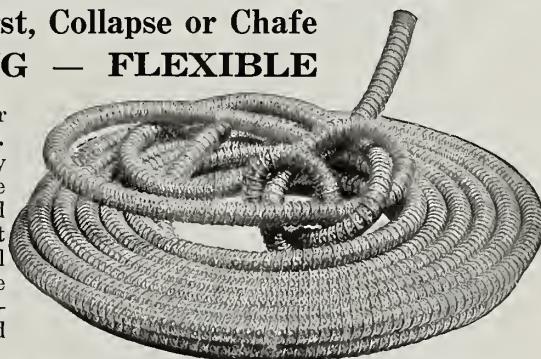
## Mulconroy Flexible Metallic Spray Hose

Can't Kink, Twist, Burst, Collapse or Chafe  
**LIGHT — STRONG — FLEXIBLE**

Answers all requirements for all kinds of spraying. 1000 lbs. pressure will not burst it. Easily coiled in a three inch circle. Tube specially compounded to stand spraying solutions. Hose cannot kink, and therefore delivers full capacity at all times. Outside protected against knocks, dragging over rough surfaces, and sharp turns.

Trial order will show satisfaction and economy.

Manufactured solely by **MULCONROY COMPANY, Inc.** Established 1887  
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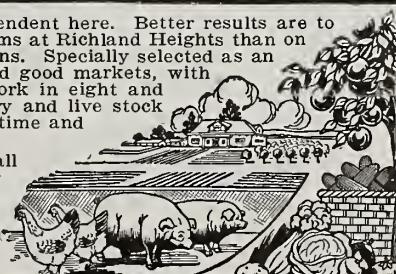


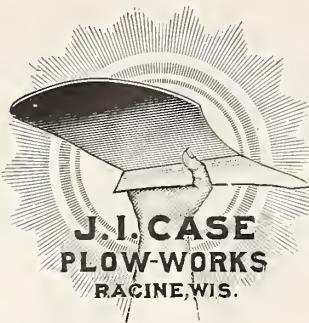
## Buy one of these 5 and 10 Acre LITTLE FARMS IN VALLEY OF VIRGINIA.

You can be happy, prosperous and independent here. Better results are to be had on these 5 and 10-acre Little Farms at Richland Heights than on much larger farms in less favored sections. Specially selected as an ideal location. Near railroad station and good markets, with fast trains to Philadelphia and New York in eight and ten hours. Fine fruit, vegetable, poultry and live stock country—farms \$250.00 and up, on long time and easy payments.

Write now for attractive booklet, "Small Farms for Little Planters," and other interesting literature about the South.

**F. H. La Baume, Agricultural Agent**  
N. & W. Ry.  
228 Arcade Bldg., Roanoke, Va.





## All CASE Plows are GOOD Plows

but we have had a plow made up for us that is especially FINE for ORCHARD WORK

### The J.I. CASE VINEYARD PLOW

in the 8 and 10-inch sizes fill YOUR need for a good orchard or vineyard plow. This plow is all steel, with steel handles that are provided with swivel so that the plow can be operated close to the trees or vines without inconvenience to the operator. Has a side chain attachment which enables the hitch to be shifted 7 inches to either side of the center point of the beam. If there is no Case Agent near you a card will bring you price and full descriptive matter on the J. I. Case Vineyard Plow.

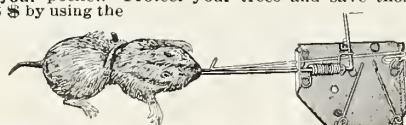
We carry a full line of  
**FRUIT GROWERS' TOOLS**

Cutaway Harrows, Planet Jr. Garden Tools, Light Draft Harrows, Orchard Trucks, Hand Carts, Spray Hose, Fittings, etc., etc.



## LOOK! MR. FRUITGROWER

One of your choice trees is Dying! Why? Gophers? Yes, it's one of those Pocket Gophers taking \$\$\$ out of your pocket. Protect your trees and save those \$\$ by using the



### CINCH POCKET GOPHER TRAP

If set by the directions and with judgment it will get the gopher and you will get the returns from that tree and others. If your dealer doesn't have the traps, write us at once. Sample trap postpaid \$5c.

Manufactured by

**W. C. EMMERSON & CO.**  
FOREST GROVE, OREGON

## MACABEE GOPHER TRAP



SMALL, SIMPLE, SURE

At all dealers. If your dealer does not handle it, send 20 cents in stamps and mention your dealer's name and get sample by mail, postage paid. Write for prices in larger quantities delivered free by parcel post.

MANUFACTURED BY  
**Z. A. MACABEE, Los Gatos, Cal.**

## Black Leaf "40" Spraying, Etc.

Continued from page 9

aphis-control work difficult. Several experiment stations recommend dilutions of "Black Leaf 40" for aphis, varying from 1 part in 800 of water for woolly aphis to 1 part in from 900 to 1200 for the green and purple or rosy aphis.

Treatment for woolly aphis: In setting out new orchards, spray all nursery stock thoroughly, roots and tops, with "Black Leaf 40" one to 800 plus soap (1 pint to 100 gallons of water plus 3 to 4 pounds of soap). For woolly aphis on the tops spray with "Black Leaf 40" diluted 1 to 800 plus soap (1 pint "Black Leaf 40" plus 3 to 4 pounds of soap to 100 gallons of water), using a pressure of 200 to 250 pounds. For treating woolly aphis on the roots we suggest that the soil be removed from around the trees, sufficiently exposing the infested area to enable the spray to permeate the soil and reach the insects so as to thoroughly wet them. Spray with the same solution that is recommended for use on the tops. Use a coarse stream and apply spray liberally.

Don't wait until after the buds have opened before applying your first spray for aphis. Don't wait till the leaves have curled in making later applications. Don't omit the soap when spraying with "Black Leaf 40" uncombined with bordeaux, lime-sulphur or arsenate of lead. Don't forget that thoroughness is half the secret of success in spraying for aphis.

Combination sprays: In spraying for several pests occurring at about the same time, the matter of combining sprays is one of importance and one in which a considerable saving may be effected. "Black Leaf 40," used alone, will be effective not only against aphis, but also for red spider, apple tingis, apple-leaf hopper and apple red bug. "Black Leaf 40" may be combined with lime-sulphur when used for San Jose scale (when bud tips show green), apple scab, moss, lichens, etc. Iron sulphide when used for apple mildew. Bordeaux mixture when used for apple scab and other fungus diseases. Arsenate of lead or arsenite of zinc when used for codling moth, bud moth, tent caterpillars, etc. When using "Black Leaf 40" with lime-sulphur, bordeaux mixture or arsenate of lead omit the soap.

Life Histories.—The four more important species of aphis that attack the apple are tabulated below:

Green apple-aphis (*aphis pomi*). Eggs laid at base of buds and on twigs in late fall; attacks buds, young leaves and blossoms. Also attacks pear, hawthorn and quince.

Rosy, brown or purple apple-aphis (*aphis sorbi*). Eggs laid on trunks and larger branches in fall; attacks leaves, tender shoots and fruit clusters.

Woolly apple-aphis (*schizoneura lanigera*). Eggs laid on elm in fall; attacks roots, trunks, branches and twigs.

European grain-aphis (*siphocoryne avenae*). Eggs laid on apple and pear trees in fall; attacks foliage. Also at-



## "Friend" Queen

BUILT IN TWO SIZES  
The Sprayer You Will Eventually Buy

CALIFORNIA HAS ADOPTED IT THERE'S A REASON!

## California Spray Chemical Co.

COAST DISTRIBUTORS  
Watsonville, California

### MANY OTHER SIZES AND STYLES

Complete "Friend" Line of Sprayer Accessories and Repairs



**WANTED  
A MAN**

To retail Rawleigh Products, town and country. Some good old vacant territories. Largest and best line. One of the oldest and largest companies in the world. Six Factories and Branches. All Products supplied from new Pacific Coast Branch. Quick Service. Low Freight. We want only industrious men capable of earning \$100 and up per month and expenses. Must have means for starting expenses and furnish Contract signed by 2 responsible men. Address W. T. Rawleigh Company, Oakland, Cal., giving age, occupation and references.



## H. HARRIS & CO. Fruit Auctioneers

131 State Street  
Boston, Massachusetts

Established 1847

Frank Moseley  
Frank L. Ripley  
Cutler B. Downer



Ask for Catalogue No. 5

tacks pear, grains, grasses and hawthorn.

**Green Apple-Aphis.**—When growth starts in the spring the minute, shiny black eggs of the green apple-aphis hatch. All the eggs are hatched generally before the buds have opened. The young green plant lice congregate on the green bud tips and first leaves. These plant lice produce living young and the increase in number is very rapid as the leaves and blossoms appear, upon which hundreds of aphis may be seen feeding. The early generations of the green apple-aphis are wingless. Winged individuals begin to appear at the beginning of summer and the infestation spreads from branch to branch, tree to tree and orchard to orchard. At the approach of cold weather eggs are laid on young twigs and at the base of the buds, and there they remain throughout the winter until the warmth of spring causes the eggs to hatch and the young plant lice to start the seasonal histories all over again.

**The Rosy, Brown or Purple Apple-Aphis.**—The young of this species hatch generally later than those of the green apple-aphis and attack the early leaves. As their popular names imply, they are of several shades of red. These aphids are particularly noticeable on the leaves around the fruit clusters. Curled leaves and distorted fruit show the presence and work of this species. After midsummer the rosy aphis disappears from the trees and reappears in the fall. The eggs are laid on the trunk and older growth and are not generally as plentiful as the eggs of the green apple-aphis. The rosy apple-aphis passes the winter in the egg stage and hatches in the spring as the buds are opening. The Oregon Experiment Station carried on some experiments in the control of this aphis and found that "Black Leaf 40" was effective used alone or combined with lime-sulphur. Lime-sulphur, used alone at a winter dilution of 1 to 10, failed to have any effect on the aphis. Do not wait until the leaves are curled before spraying for this aphis.

**The Woolly Apple-Aphis.**—This aphis when grown is covered with a white,

## True-to-Name Nursery

GALLIGAN BROS.  
Proprietors

HOOD RIVER, OREGON DUFUR, OREGON

Growers of high grade nursery stock, guaranteed true-to-name. Breeders and importers of purebred Big Type Poland-China Hogs. Service boars, bred gilts and weanling pigs for sale.

For catalog of nursery stock and prices on swine, write

## True-to-Name Nursery

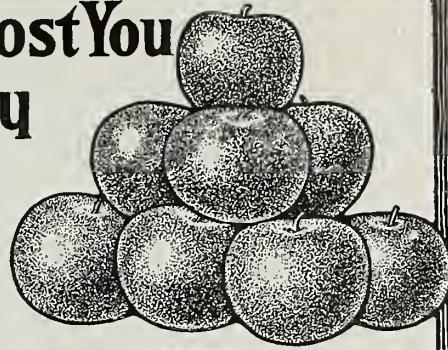
HOOD RIVER, OREGON

**YOU CAN EARN \$50.00 PER DAY**  
with the  
**Gearless Improved Standard  
Well Drilling Machine.**  
Drills through any formation.  
Five years ahead of any other.  
Has record of drilling 130 feet  
and driving casing in 9 hours.  
Another record where 70 feet was drilled on 2½ gal. distillate at 9¢ per gal. One man can operate. Electrically equipped for running nights. Fishing job. Engine ignition. Catalogue W.S. REIERSON MACHINERY CO., Manf'rs., Portland, Ore.

# What will it cost You Not to spray For Aphis?



APHIS INJURED



PERFECT

**The U. S. Dep't of Agric. Says \$30,000,000**

is the annual damage done to the American fruit crop by insects. Aphis causes a considerable part of this loss and the standard insecticide recommended by experiment stations and spraying experts for this and many other orchard pests is

### "BLACK LEAF 40"

Guaranteed to contain 40% Nicotine

THIS IS THE TIME TO SPRAY  
for Apple Aphis—just as the leaf buds show green. Don't delay till the foliage gives the Aphis protection. Use "BLACK LEAF 40" when buds are like the one shown in this picture. Write us for Apple Aphis Bulletin.

"BLACK LEAF 40" is not recommended for all insects; but for Aphis, Pear Psyla, Hop Louse, and many other soft-bodied sucking insects it has proven to be a highly effective and a very economical insecticide.



### LET US HELP YOU PROTECT YOUR ORCHARD

If your dealer will not supply you with "Black Leaf 40", send us P. O. Money Order for \$2.50 and we will send you, express prepaid, a 2 pound can that will make 200 gallons of effective spraying solution. If you are in doubt about the insecticide you need, write us, send specimens, or give descriptions of your insect enemies and we will help you to find the proper insecticide.

**KENTUCKY TOBACCO PRODUCT CO. Dept. C Louisville, Ky.**

INCORPORATED

**SPECIAL—"Black Leaf 40" is Duty Free in Canada**



### FREE ON REQUEST—Our Silent Salesman

Quiet and unassuming, but up to date and reliable. Nicely illustrated and printed especially for Western buyers of

**SEEDS OF ALL KINDS.** Trees, Roses, Garden and Poultry Supplies, Canaries, Parrots, Bird Supplies, Fertilizers, Sprays, etc.

Don't buy until you read about our new policy—"No agents, but special prices, charges prepaid."—We save you time and money. Ask for Catalog No. 27—the new one.

**ROUTLEDGE SEED & FLORAL CO.** 169-171 SECOND STREET PORTLAND, OREGON

### HOOD RIVER VALLEY NURSERY COMPANY

Phone 5634

Route No. 3, Box 227

HOOD RIVER, OREGON

Plantation four miles southwest of station, Belmont Road

We will be pleased to show you trees, apple trees that have a heritage, a quality that should be considered by everyone who plants a tree. Our trees are grown in clean hillside Virgin red shot soil with clay subsoil, producing the most vigorous root system. Our buds are selected from the best bearing healthy Hood River trees that make the Hood River apple famous throughout the world. Our trees will give you satisfactory results in vigor, fruit and quality. Ask for catalog. We guarantee our products. Apples, pears, peaches, apricots, almonds and walnuts. A complete line of the best varieties of all kinds of fruits.

H. S. BUTTERFIELD, President

W. J. ENSCHEDE, Manager

# DEPENDABLE BRAND Lime Sulphur Solution

*The Standard Solution for  
The Fruit Growers of the Northwest*

Highest percentage of Sulphur in Solution in proportion to Baume test of any brand offered on this market.

MANUFACTURED BY

**GIDEON STOLZ CO., Salem, Oregon**

## Better Crops on Perfect Seed Beds

Prepared with the

### ACME Pulverizing Harrow

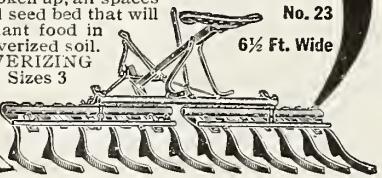
After plowing sod or stubble, it must be worked down thoroughly and pulverized. Sods, clods and lumps must be broken up; air spaces and voids worked out and filled to insure a good seed bed that will give BETTER CROPS. Make available the plant food in plowed in manure by thoroughly mixing with pulverized soil. BETTER CROPS will result. The "ACME" PULVERIZING HARROW makes possible the perfect seed bed. Sizes 3 to 17½ ft. wide, for one to four horses.

**Light Draft—All Steel—Low Price**

Write for catalog and name of nearest dealer.  
DUANE H. NASH, Inc., 347 Division Ave., Millington, N. J.

No. 23

6½ Ft. Wide



## GIANT WINTER RHUBARB

### Now Best Time to Plant

Should return from \$1,000 to \$1,500 per acre first year. If interested in Rhubarb, Berries or Cactus, write J. B. WAGNER, Specialist, Pasadena, California.

## ZEROLENE

*the Standard Oil for Motor Cars*

has just the right "body"—body enough to keep the metal surfaces apart—but not to be a drag on the power—light enough to reach the places where needed—and quickly. And it maintains body at cylinder heat.

Dealers everywhere.  
Standard Oil  
Company  
(California)  
Portland



## To STRAWBERRY GROWERS

The returns from your strawberries depend upon **quantity** and the **size** of the berries.

### Beaver Brand Animal Fertilizers

"A Fertilizer for Every Crop"

supplies your land with the constituent elements necessary to grow better and larger quantities of fruit.

Our **Beaver Brand "D" Animal Fertilizer** is prepared especially for strawberry and fruit growers.

Send for fertilizer booklet F37. Contains information of value.

### UNION MEAT COMPANY

North Portland, Oregon



woolly material, which is very noticeable and gives the popular name to this species. This aphid is the only one infesting the apple that attacks the roots in addition to the parts above ground. The damage caused by this insect has been so widely recognized, particularly on nursery stock and young trees, that several states have passed laws against its introduction into or toleration within the state. The woolly apple-aphid, unlike the green and rosy apple-aphid, prefers the bark to the foliage or fruit. The roots, trunk, branches and twigs are attacked. Small blister-like swellings are caused on the parts attacked; this does not always occur, however, on the twigs. Roots may be so covered with these growths as to cause the death of young trees. Infested twigs sometimes crack, giving entrance to fungus spores and bacterial diseases. In the spring the plant lice that have spent the winter in cracks of the bark or in wounds become active and attack new, tender bark on young or old parts of the tree. Some of the individuals that have passed the winter at the base of the tree or on the roots will likewise move to the parts of the tree above ground and assist in the attack. Many of the plant lice on the roots remain there the year round.

### A Sure Way to Keep Your Tobacco Supply Always Fresh and Pipe-fit

Used to be that a man had to contend with smoking dried-out tobacco that burned like firebrands and seared the everlasting lining out of his mouth, but not so today. Now he can keep his supply just as fresh and fragrant a month or more afterward as it was the day he got it.

A fine scheme to keep the goodness in the tobacco from first to last pipeful has been hit upon by the R. J. Reynolds Tobacco Company, of Winston-Salem, North Carolina, the makers of Prince Albert tobacco. It's a crystal glass humidor with a removable top held on by a patented band that makes it airtight. There's a sponge in the top to keep the tobacco always pipe-fit. The makers pack a pound of Prince Albert in this container and you can buy one at almost every store that sells tobacco.

Almost every smoker this side of the Gulf has seen or heard something about Prince Albert. It's known all over the States as "the national joy-smoke," because a man can smoke as much and as hard as he likes without ever having any sore tongue or throat worries. Simply doesn't nip, that's all. Had its "teeth" pulled out by a patented process controlled exclusively by the Reynolds people.

At present, a series of quaint and interesting advertisements is running in this publication. Everyone of them is chockful of that happy, good-natured P. A. spirit that makes a man look for the next one just natural-like. You'll sure be interested in them; keep a lookout.—[Adv.]

## Spraying Economy, Etc.

Continued from page 8

get along without at least applying two sprays for the codling moth. In some years good results are secured without the third spray, yet there is little question but that the third spray for the codling moth will more than pay for itself, and especially if there were many worms the previous season. Often the grower who is accustomed to omitting the third spray is confronted with the appearance of stings and blemishes on his apples late in the summer, and which necessitates culling severely. Our own experiments during the summer of 1914 gave from 5 to 1.5 per cent wormy fruit with the three sprays applied thoroughly and to trees which bore a high per cent of wormy fruit in 1913.

**Selecting the Spray.**—There are many different brands of spray materials on the market. Consequently the grower has a wide latitude from which to choose his spray. Moreover, we see every year an increasing number of new sprays on the market, and which undoubtedly have merit. These should be encouraged if they give any better results or possess marked advantages over the old and tried sprays. It would be better, however, for the first year to try out the new spray on a moderate scale and check it up with the older spray. Growers are often inclined to blame the spray material for their lack of success, even when the thoroughness of application has been neglected, either with or without the owner's knowledge.

In choosing a spray, its past record should be the point most emphasized, whether secured by the prospective purchaser or by someone in whom he has confidence. It is also well to give a spray credit for being all right until the contrary is proved. One should not select a brand of arsenate of lead because it contains a high arsenic content, supposing it to be better, and without regard to the way the arsenic has entered into combination with the lead. It is better to use an "Ortho" arsenate containing 12 per cent of arsenic oxide than one of another combination with the lead and having 3 or 4 per cent more arsenic oxide. The former is not so apt to give up free arsenic in the presence of neutral or alkaline solvents and thus produce injury to the foliage. It is also advisable, especially when acid arsenates are used, to combine one pound of lime to each pound of the arsenate of lead in the spray tank, in order to lessen the danger of burning. This danger is negligible when either lime-sulphur, atomic sulphur or iron sulphide is combined with arsenate of lead to be used against the codling moth and apple scab, or codling moth and apple mildew.

For the purpose of comparing the results of the use of arsenate of lead, sold both in the paste and powdered form, an experiment was conducted in the Boise Valley during the season of 1914 which had for its object a comparison of results from the practical applica-

# Hansen's Gloves

## Stay Soft in Spite of Soaking

**B**ECAUSE of the special Hansen-treated leather this glove will remain soft and pliable regardless of wetting. It wears long and *keeps soft*. The *seasonable* quality in Hansen's Gloves, their correct proportions and comfort make them widely popular.

For the *special* work of the spraying season these gloves are exactly adapted. They protect your hands from the solution and dry out soft as new. Never bunglesome or awkward; their perfect fit allows prompt action and nimble fingers as if you had no gloves on.

### Write for Free Book

Shows many of 500 styles—gloves and mittens for men, women and children—at work or sport, driving, motoring. All at reasonable cost.

If your dealer is not supplied, write us for information where to buy.

**O. C. Hansen Mfg. Company**  
130SP Detroit St.  
Milwaukee, Wis.



**RHODES DOUBLE CUT PRUNING SHEAR**

*Pat'd June 2, 1903.*

**RHODES MFG. CO.,**  
**520 S. DIVISION AVE., GRAND RAPIDS, MICH.**

THE only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay Express charges on all orders. Write for circular and prices.

No Matter What Crop You Grow, Your Soil Must be Right Always

The universal soil need is Phosphorous.

The most economical and logical source of Phosphorous is

**Finely Ground**

**SHIELD BRAND**

**High Grade**

# Phosphate Rock

*The Phosphate of Lime*

EFFICIENCY AND ECONOMY ARE INSEPARABLE EVERYWHERE

**UNITED STATES PHOSPHATE CO.**

405 Marsh-Strong Building, Los Angeles, California

**TIE UP**

**TRAUNG LABELS ATTRACT ATTENTION**

We are especially qualified to design and execute attention compelling **LABELS** that are necessary to give the proper selling power to your goods.

**HIGHEST QUALITY PROMPT SERVICE - LOWEST PRICES**  
SAMPLES AND PRICES UPON APPLICATION  
"SATISFY THE CUSTOMER" Is Our Slogan

**TRAUNG LABEL & LITHOGRAPH CO.**  
SAN FRANCISCO, CAL.  
BATTERY & GREEN STS.

PORTLAND, ORE.  
PARK AND STARK STS.

Send for our 1915 Art Calendar. Free on Application

**"WOOD-LARK"**  
TRADE MARK

**SQUIRREL AND GOPHER POISON**  
QUICK, CERTAIN,  
→ DEADLY. ←

Ready for Instant Use. Never Fails  
Destroys Squirrels, Gophers, Prairie Dogs, Sage Rats. Apply now—will save millions in leaky irrigation ditches, destroyed fruit trees and alfalfa fields. Money back if it ever fails. "Wood-Lark" for 25 years has stood the test. It's crop insurance against rodent pests. If your dealer hasn't it, write us.

**Clarke, Woodward Drug Co.**  
PORTLAND, OREGON

WE MAKE A SPECIALTY OF

# Catalogs, Booklets and Circulars

FOR  
Nurserymen, Fruit Growers, Manufacturers  
and Selling Agents

Write us for specifications and information. Quality and Service

**F. W. BALTES AND COMPANY**  
Fine Printing PORTLAND, OREGON

tion of different brands of these spray materials. The trees selected were of the Rome Beauty and Jonathan varieties, eight years old, and producing about 15 per cent wormy fruit in 1913. The plats were selected from the inside of the orchard block, contained about two acres each, and of both of the above varieties. Two standard brands of powdered arsenate of lead and one paste arsenate of lead, all obtained on the local markets, were used in the test. These were selected because they represented the sprays accessible on the local market at that time. Three sprays were applied during the season, with a power sprayer maintaining a pressure of 200 pounds or more, and hose equipped with extension rods and nozzles capable of throwing a coarse driving spray. The work was done by the owner and myself, and care taken to apply all three sprays thoroughly, especial attention being paid to the first or "calyx" spray. An effort was made to reach all of the blossoms with this spray, which was applied May 12th. The second application was made May 29th and the third July 18th. The paste was applied at the rate of  $2\frac{1}{2}$  pounds to 50 gallons of water and the powder form applied at the rate  $1\frac{1}{4}$  pounds to 50 gallons of water, or just one-half as much as the paste, since the powder is known to have twice the strength of the paste. The fruit from three trees of each variety in each plat was carefully examined at picking time for evidence of injury from worms and the results are here tabulated:

SPRAYING EXPERIMENTS		
<i>Sherwin-Williams Powdered Arsenate of Lead</i>	<i>Jonathan</i>	<i>Rome Beauty</i>
Number of apples examined.	1,644	1,694
Number of apples wormy ...	11	24
Per cent of apples wormy...	.67	1.42
Insecticide rating .....	....	98.95
<i>General Chemical Co. Paste Arsenate of Lead</i>		
Number of apples examined.	2,621	3,044
Number of apples wormy ...	17	38
Per cent of apples wormy...	.65	1.24
Insecticide rating .....	....	99.03
<i>"Corona Brand" Powdered Arsenate of Lead</i>		
Number of apples examined.	1,681	3,439
Number of apples wormy ...	9	37
Per cent of apples wormy...	.54	1.08
Insecticide rating .....	....	99.10

By careful attention to the manner and time of application of the sprays it has been possible to reduce the percentage of injury from codling moth to less than 1.5 per cent in 1914 where the injury was 15 per cent in 1913, and at the additional cost of but one spray (the third). Two sprays had been given this orchard in 1913 by the owner, who used a heavier strength of arsenate of lead than here given. The experiment further shows that there is little difference in actual results, whether the paste or powdered form of arsenate of lead is used, both giving good results, though the powder has a slight advantage in ease of mixing. The point to note is that good results depend on the time and thoroughness of application rather than spray material used, and these after all are the most important factors in both the economy and efficiency of our spray materials.

**Executive Committee, Etc.**

Continued from page 7.

came cashier. Later this bank was converted into the First National Bank of Wapato, of which Mr. Jones at the present time is vice-president and manager.

Mr. Jones has developed an orchard of forty acres near Wapato, consisting of peaches, pears and apples, which is now seven and eight years old.

Mr. Jones is also secretary of the Yakima Reservation Water Users' Association.

Mr. Jones was a very earnest worker in the Growers' Council, being a man of many years' experience in connection with large selling agencies, in merchandizing, and many years' experience in the banking business. Mr. Jones is a man exceedingly popular in his own district and has the confidence of the fruitgrowers of the Yakima Valley.

\* \* \*

**MR. W. H. PAULHAMUS,** Puyallup, Washington, Chairman of the Executive Committee of Three of the Fruit Growers' Council of 107.

Mr. W. H. Paulhamus was born on the 4th day of March, 1865, and is 50 years of age. His early days were spent at Altoona and Sharon, Pennsylvania, and Youngstown, Ohio, at which places he attended the public schools. At 18 years of age he left Youngstown, Ohio, for Aberdeen, South Dakota, where he entered the banking business, and later at Sumner, Washington. He followed the banking business up to December, 1894.

Mr. Paulhamus has engaged in farming outside of Puyallup, Washington, and has been manager of the Puyallup and Sumner Fruit Growers' Association since 1902. Commencing with a capital stock of \$2500, Mr. Paulhamus has created a capital and surplus of \$102,503.00. Appreciation of his value to this association is shown in a very forcible way by the fact that the association has his life insured for \$25,000 in case of death and \$75,000 in case of accident. The importance of this association to the State of Washington is shown in many ways. Its value as an industry is shown quite clearly by comparing its payroll with the car shops of the Northern Pacific at Tacoma. The Northern Pacific car-shop payroll in the largest month of 1914 is reported, we are informed, as \$68,000; the payroll of the Puyallup and Sumner Fruit Growers' Association Cannery for the largest month in 1914 was \$238,000.

Mr. Paulhamus has built up an immense industry from a very small one. The volume of the industry is indicated by the number of employes; during the berry packing and canning season from 7,000 to 10,000 people are engaged in this work and received their pay from the industry that has largely been created through the able management of Mr. Paulhamus.

Mr. Paulhamus is one of the largest raspberry growers in the Puyallup

# IRON AGE SPRAYERS

## —The Big Favorite with Northwest Fruit Growers

Thousands of fruit men know that "Iron Age" means the best sprayer on the market. If you are interested in sprayers this spring, you should write now for the Special "Iron Age" Catalogs and name of the nearest dealer.



### All Sizes —Hand or Power

"Iron Age" is the largest line of Spraying Machinery made. Hand Sprayers, Bucket Sprayers, Vertical and Horizontal Barrel Sprayers, and Power Sprayers in all sizes.

"Iron Age" Sprayers are equipped with all attachments for trees and small fruit. Prices range from \$3.50 to \$300.00.

Fill out the coupon or send a postal today for the Special Spraying Catalogs and name of your "Iron Age" dealer.

"Iron Age" Goods are Distributed in the Northwest by

**R.M.WADE & CO.**  
**SINCE 1865.**  
**PORTLAND. ORE.**

Oldest and Largest Independent Wholesalers of Farm Machinery in the Pacific Northwest

R. M. Wade & Co.  
MAIL THIS COUPON  
331 Hawthorne Avenue, Portland,  
Send me Special "Iron Age" Spraying  
Catalogs.  
Name \_\_\_\_\_  
Address \_\_\_\_\_

# "BLUE RIBBON"

(EXTRA FANCY)

# "RED RIBBON"

(FANCY)

## Famous Brands of Yakima Apples

Packed under our personal supervision  
Get in touch with us by wire or letter

### Yakima County Horticultural Union

E. E. SAMSON, Manager  
NORTH YAKIMA, WASHINGTON

# EVERY STUMP HOLDS A DOLLAR



The ground covered by an average stump and its roots will grow 25c. to 50c. worth of food crops per year. A hundred-stump acre will produce \$50 worth of food per year after clearing. Why leave these dollars buried under stumps and pay taxes on stump land when the whole world offers big prices for American farm products?

**DU PONT**

or Repauno  
Stumping Powder \*

\* Will get them out in cold and wet weather, when you have plenty of time. Clear land early and crop it this year. This explosive is low freezing, hence works well while snow is on the ground. It takes less Stumping Powder in wet weather than in dry. Turn the cold wet days of March and April into cash.

\* Order Red Cross quickly from any hardware dealer or

**DU PONT POWDER CO.  
SEATTLE, WASH.**

1915

## How Many Dollars Are Buried In Your Farm?

# D. Crossley & Sons

ESTABLISHED 1878

## Apples for New York and Export

CALIFORNIA, OREGON, WASHINGTON, IDAHO AND  
FLORIDA FRUITS

Apples handled in all European markets at private sale. Checks mailed from our New York office same day apples are sold on the other side. We are not agents; **WE ARE SELLERS.** We make a specialty of handling **APPLES, PEARS AND PRUNES** on the New York and foreign markets. Correspondence solicited.

200 to 204 Franklin Street, New York

NEW YORK

LIVERPOOL

LONDON

GLASGOW

Valley and in addition conducts a model dairy at Sumner, Washington.

He is so well known to the fruit-growers of the Northwest, as he has addressed practically every horticultural meeting in the State of Washington and so many conventions that it hardly seems necessary in a brief sketch like this to make any further comment. However, for the benefit of the few who have not met Mr. Paulhamus, it seems proper to say that he is considered one of the able men in the State of Washington; a successful business man for himself and is given credit for the most phenomenal success that has been achieved by any cannery in the Northwest; that he has built up to the greatest magnitude the largest berry-growing district in the Northwest, which shipped some 300 ears of fresh raspberries annually. Mr. Paulhamus is not only noted for his ability, but is a man of power, force and energy, a man who acts according to his own convictions without fear or favor. To him is due in a very large measure indeed the creation of the Fruit Growers' Council, in which the fruitgrowers have the greatest confidence in controlling the marketing concerns in such a manner as will result in securing for the growers far better prices for their fruit in the future than they have received in the past.

It was Mr. Paulhamus who originated the idea of controlling the marketing organizations, similar to the plan of the Interstate Commerce Commission or the Bank Examiner Laws.

Mr. Paulhamus in his able addresses delivered in the Wenatchee Valley, Hood River Valley, Yakima Valley and at the National Apple Show at Spokane, and at the fruitgrowers' conventions in Seattle and Taeoma has won the confidence of the fruitgrowers of the Northwest, and it seems to be the unanimous opinion that the fruitgrowers of the Northwest will unanimously support the Fruit Growers' Council of 107, the Board of Control of Ten and the Executive Committee of Three, of which Mr. Paulhamus is chairman and manager.

MR. TRUMAN BUTLER, Hood River, Oregon, Member of the Executive Committee of Three of the Fruit Growers' Council of 107.

Mr. Truman Butler was born in Ottawa, Kansas, January 4, 1872, and is now 43 years of age. With his parents he moved to The Dalles, Oregon, when he was ten years old, where he resided for eighteen years, attending the public schools there, followed by a course of one year in the famous old educational institution known as the Waseo Independent Academy at The Dalles. Later on Mr. Butler attended Lane University at Lecompton, Kansas, which college was later merged with another small college in Kansas.

After his course at Lane University, Mr. Butler took a position with The Dalles, Portland and Astoria Navigation Company, remaining with this

Company for seven years as purser on the river steamers between Portland and The Dalles, and also as agent for the company in Portland.

In 1900 Mr. Butler came to Hood River, and with his father, Mr. Leslie Butler, established the first bank in Hood River, known as the Butler Banking Company.

Mr. Butler has resided in Hood River for fifteen years, and while not engaged in public life, he has been very active in the development and prosperity of Hood River Valley. With his father he started the first bank in Hood River with a small capital, which has grown to a capital of \$100,000 with a large surplus. He has not limited his field of work here to the upbuilding of the bank alone, but has earnestly worked for the benefit and betterment of the community in which he resides. By those who know him well he is considered a constructive, creative man of ability with good, sound judgment, and a man of conservative methods.

Mr. Butler has assumed a position on the By-Product Committee of Ten, to which he has devoted much time and has already rendered efficient service which is highly appreciated by the fruit districts of the Northwest. It is believed that Mr. Butler will render able and valuable services to the fruit-growers in his position as a member of the Executive Committee.

\* \* \*

**MR. A. D. MOE, Hood River, Oregon,**  
Member of the Board of Control of  
the Fruit Growers' Council of 107.

Mr. A. D. Moe was born in Princeton, Wisconsin, August 31, 1865, and is therefore 49 years of age. His education was received principally in public schools. Early in life he learned the printing trade. In 1891 he established the South St. Paul Reporter, at St. Paul Union Stock Yards, devoted to the livestock industry, which he conducted with success for some eleven years. In 1902 he moved to Grand Forks, where he became proprietor and editor of the Grand Forks Daily Plaindealer, which he ably and successfully conducted for two years. In 1904 Mr. Moe came west and settled in Hood River, purchasing the Hood River Glacier from Sam Blythe, which was the first newspaper established at Hood River. Mr. Moe has been editor and publisher of the Glacier ever since. The paper is recognized as a paper of quality and influ-

## Steam Pressure Canning Outfits

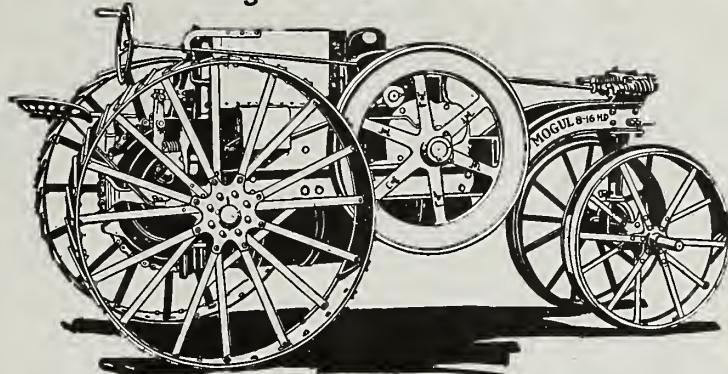
Can your Fruits, Vegetables, Corn, Meats, Fish, etc., for home use and for sale at a big profit. Outfit more than pays for itself the first year. Eleven different sizes. Book of Canning Recipes free with outfit. Tells how to can everything. Write for Catalogue B.

Built by

**HENNINGER & AYES MFG. CO.**

47 First Street  
PORTLAND, OREGON

## Our New Year's Announcement A Mogul Orchard Tractor for \$675



We announce for 1915 an all-purpose Orchard tractor with 8-H. P. at the drawbar and 16 on the belt—Mogul 8-16

### An Easily Handled, Short Turning Tractor

**T**HIS new Mogul 8-16 tractor will do the work of eight horses in the orchard.

Being a four-wheeled, all-purpose tractor, you can use it every working day.

It will do plowing and seeding as well as orchard cultivating.

It will draw manure spreaders, wagons, mowers or binders.

It will run a corn sheller, feed grinder, small shredder, thresher or ensilage cutter.

Any farmer can buy this new Mogul 8-16 tractor for \$675.00 cash, f. o. b. Chicago.

The man who can use one of these Mogul tractors pays, at this price, the least for which a good, reliable, all-purpose 8-16 tractor can be sold.

If you want to use a Mogul small-farm tractor for spring work, your order should be placed now with the I H C local dealer.

Write us for full information.

### International Harvester Company of America

(INCORPORATED)



Crawford, Neb. Denver, Col. Helena, Mont. Portland, Ore.  
San Francisco, Cal. Spokane, Wash. Salt Lake City, Utah



## Arcadia Irrigated Orchards

THE LARGEST AND MOST SUCCESSFUL ORCHARD PROJECT  
IN THE ENTIRE WEST

7,000 acres planted to winter apples. Gravity irrigation. Located 22 miles north of Spokane, Washington, directly on the railroad. We plant and give four years' care to every orchard tract sold. \$125, first payment, secures 5 acres; \$250, first payment, secures 10 acres; balance monthly.

SEND FOR BOOKLET

**Arcadia Orchards Company**  
Deer Park, Washington

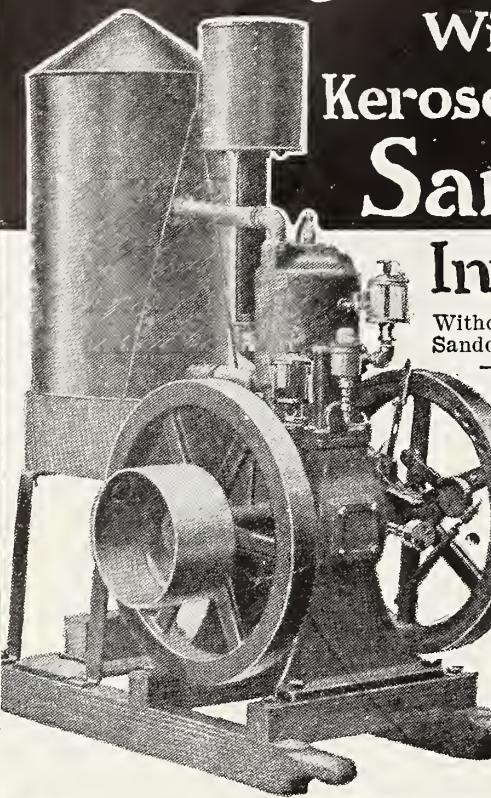
# Save $\frac{2}{3}$ Fuel Cost With A Kerosene Burning Sandow

## Investigate!

Without change of equipment, the Sandow runs on kerosene—gasoline—distillate—or alcohol.

On low priced kerosene, the Sandow delivers more power per h. p. of rating, than ordinary engines do on gasoline. With the Sandow you can save the price of your engine in upkeep economy alone. Investigate! Get all the facts.

Write for Free Sandow Book, which shows you by illustrations from photographs why the Sandow is the simplest engine made—the easiest to run—the most free from trouble and repair expense.



## Only 3 Moving Parts

Starts at 40 degrees below zero. Starts without cranking—runs in either direction—throttle governed—hopper and tank cooled—speed controlled while running—no cams—no valves—no gears—no sprockets—light weight—can easily be taken anywhere for work—complete ready to run.

### THERE'S A SANDOW FOR EVERY FARM

Made in all sizes from 1½ H. P. to 18 H. P. Have a Sandow to meet your needs—do the work you want done at greatest economy. Sandow will do your pumping—run your feed grinders—your cream separators—do all the stationary power work of farm or shop, and save you more money than any other engine on the market. Sandow is not just an ordinary engine. Special design for kerosene fuel means more simplicity, greater durability. Send for Free Book and judge for yourself.

### TEN YEAR IRON CLAD GUARANTY

Absolutely protects you—Sandow must make good on every claim. It is because Sandow is making good every day on thousands of farms that we can make this iron-clad, binding guaranty. Users everywhere will tell you how Sandow saves fuel—saves trouble—saves repairs—and can be depended on for power all the time.

### FREE TRIAL ON YOUR FARM

Book gives our Free trial proposition. Use the Sandow every day 30 days on your own farm. If you don't say it is the most economical and most powerful farm engine you ever saw—if it does not satisfy you every way, send it back and we will refund every cent you paid for it.

### SPECIAL LOW PRICE DIRECT TO YOU

Just compare these rock-bottom prices for Sandow Engine, with those of any other engine manufacturer, and remember Sandow quality is unsurpassed. Sandow prices are: 1½ H. P. Bull Pump Engine, \$33.75; 2½ H. P. Sandow, \$42.50; 4 H. P. Sandow, \$65.00; 6 H. P. Sandow, \$95.00; 8 H. P. Sandow, \$140.00; 12 H. P. Sandow, \$250.00; 18 H. P. Sandow, \$385. We have no agents—no jobbers—no middlemen—no dealers. You buy of us and keep all the middle profits and commissions in your pocket. Before you get any engine, be sure to have our low figures and see what you can save.

### SEND FOR FREE SANDOW BOOK

It is full of plain facts on the farm engine question—illustrated from cover to cover with pictures from photographs showing the simple construction of every part of the Sandow—contains the letters of users of the Sandow. Remember it costs you nothing to get the facts—does not place you under any obligation whatever. Write today. A postal brings the book. Address

**Detroit Motor Supply Co.**

Detroit Mich

65 Canton Ave.

Send  
For it to day



ence. In 1906 Mr. Moe bought thirty acres of land, which he cleared and set to orchard, which is now in bearing. During his residence in Hood River he was member of the City Council for two years, secretary of the Commercial Club for two years and has been a director of the First National Bank from 1910 to 1915. Being a successful business man is sufficient assurance that Mr. Moe will act with good business judgment in the new position which he has assumed. In addition, being director of the First National Bank is further evidence of soundness of business ideas, his conservativeness and safeness.

Notes on the age of the different members of the Executive Committee and Board of Control:

Mr. C. E. Chase.....	29 years of age
Mr. C. T. Haskell.....	37 " "
Mr. Truman Butler.....	43 " "
Mr. W. M. Sackett.....	45 " "
Mr. John A. Westerlund.....	49 " "
Mr. A. D. Moe.....	49 " "
Mr. W. H. Paulhamus.....	50 " "
Mr. E. C. S. Brainard.....	51 " "
Mr. A. W. Simmons.....	59 " "
Mr. Harry Jones.....	63 " "

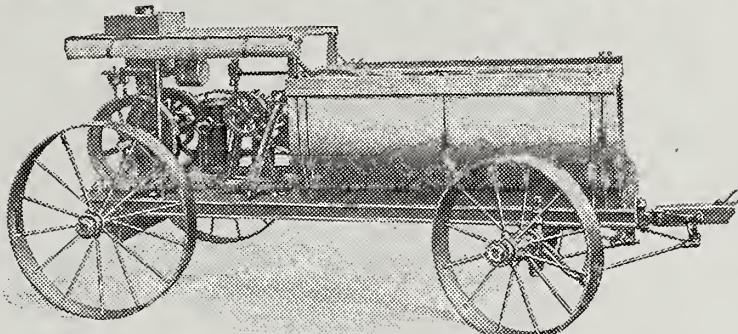
Mr. Chase is the youngest man on the board, being 29 years old, and Mr. Jones is the oldest, being 63 years old. It is evident that all these men are in the prime of life and therefore at the age when they can render the most efficient service.

Mr. C. W. Meldrum, assistant general passenger agent of the Great Northern Railway, Seattle, Washington, has called our attention in the following paragraph to our failure to mention the Glacier National Park in the February edition: "Permit me to call your attention to an oversight in the paragraph on front cover and in the editorial as well—the omission of reference to Glacier National Park. Nationalized by Congress as late as the fall of 1910, Glacier National Park had almost as many tourists during the season of 1914 as Yellowstone Park. We believe there is no question as to Glacier National Park soon becoming the nation's best known and most frequented tourist attraction. It is served only by the Great Northern Railway, which insures that travelers from the East to California stopping off at Glacier Park en route will traverse the Northwestern States with resulting benefit to Oregon and Washington. As you are well aware, there are two entrances to the Yellowstone, of which the southern gateway for several years past has been the more popular, and a glance at the map will show that it is not necessary for tourists en route to California entering Yellowstone Park via the southern gateway to visit the Northwest, but proceed via direct route through Ogden. Therefore we regard Glacier National Park one of the greatest assets of the Northwest in our efforts to secure our share of this Exposition travel."

Chas. A. Cherry Nursery, Rockford, Illinois, has just issued an interesting catalog for its dependable seeds.

# SPRAYING EQUIPMENT

In A  
Class  
by  
Itself



THE HARDIE HILLSIDE TRIPLEX

There is  
no Power  
Sprayer  
to be  
compared  
with it

Lower prices for orchard products bring home to every fruit raiser the question of production cost.

The cost of spraying equipment, the value you receive for your money, its results, cost of operation and upkeep, are receiving closer attention than ever before.

With our sales this year far exceeding our expectations, we are strongly impressed that the Hardie Idea of always and continually giving the most value and service to its customers is the cause.

Our interests are mutual. You are striving to lower your production cost. We are furnishing you the equipment with which to do it.

The various sizes and types of power machines in our line enable you to select the power sprayer best suited to your individual requirements.

Throughout the construction of all we use high grade material and sound, proven design.

The brief description below gives you a slight idea of the completeness and quality we furnish.

**ENGINE**—Water cooled, four cycle, ample power. Ability to run on sidehills with equal ease as on level ground. Ignition—gear-driven magneto, multiple cell battery or ordinary dry cells.

**TANK AND PLATFORM**—Pressed high carbon steel platform with choice of size of tank. Fully cabbed with curtains.

**EQUIPMENT**—Your choice in hose lengths, rods, etc., all of guaranteed quality.

**SERVICE**—The best in the Northwest. Large stocks of machines and parts in all fruit centers. No delays.

**PUMP**—Triplex, Duplex, Hardie Junior types. Sizes to suit your requirements. Brass plungers and plunger tubes. Doing away with all excess friction and not affected by spraying chemicals, heat or cold. Valves—Bell metal ball valves with heavy, long-lived seats. Pressure regulator—The most reliable regulator, giving you absolute control of the pressure at all times. No load on pump and engine when nozzles are not in use.

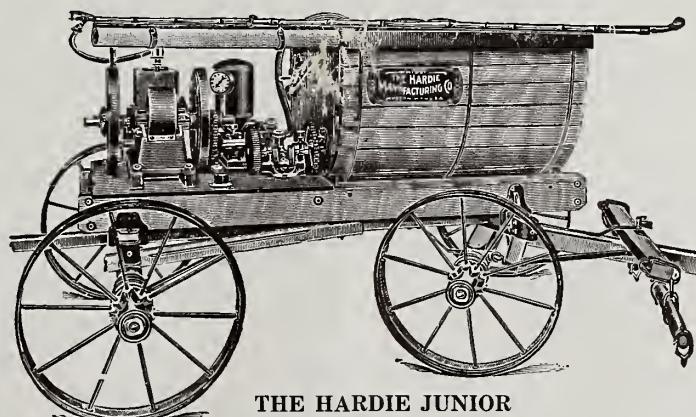
**PRICES**—The most spray pump value for your money, and a range of prices within the reach of all.

Over seven thousand fruit growers now own Hardie Power Sprayers. Reduced spraying costs. Increase your production. To do this

## BUY A HARDIE

For the  
small  
grower

A two-lead  
of hose  
machine



THE HARDIE JUNIOR

Price  
**\$150.00**  
and  
upwards  
according to  
equipment

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Unquestionably the most  
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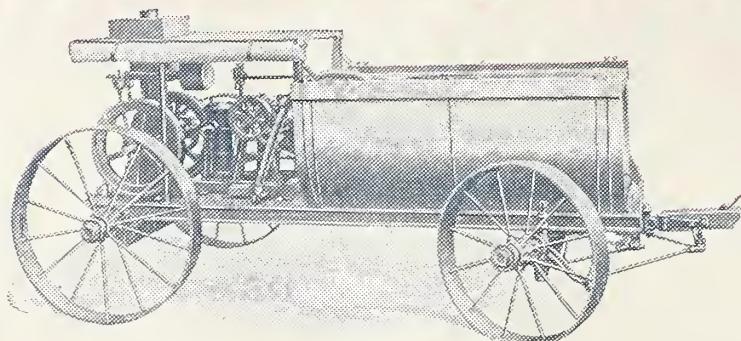
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# SPRAYING EQUIPMENT

In A  
Class  
by  
Itself



THE HARDIE HILLSIDE TRIPLEX

There is  
no Power  
Sprayer  
to be  
compared  
with it

Lower prices for orchard products bring home to every fruit raiser the question of production cost.

The cost of spraying equipment, the value you receive for your money, its results, cost of operation and upkeep, are receiving closer attention than ever before.

With our sales this year far exceeding our expectations, we are strongly impressed that the Hardie Idea of always and continually giving the most value and service to its customers is the cause.

Our interests are mutual. You are striving to lower your production cost. We are furnishing you the equipment with which to do it.

The various sizes and types of power machines in our line enable you to select the power sprayer best suited to your individual requirements.

Throughout the construction of all we use high grade material and sound, proven design.

The brief description below gives you a slight idea of the completeness and quality we furnish.

**ENGINE**—Water cooled, four cycle, ample power. Ability to run on sidehills with equal ease as on level ground. Ignition—gear-driven magneto, multiple cell battery or ordinary dry cells.

**TANK AND PLATFORM**—Pressed high carbon steel platform with choice of size of tank. Fully cabbed with curtains.

**EQUIPMENT**—Your choice in hose lengths, rods, etc., all of guaranteed quality.

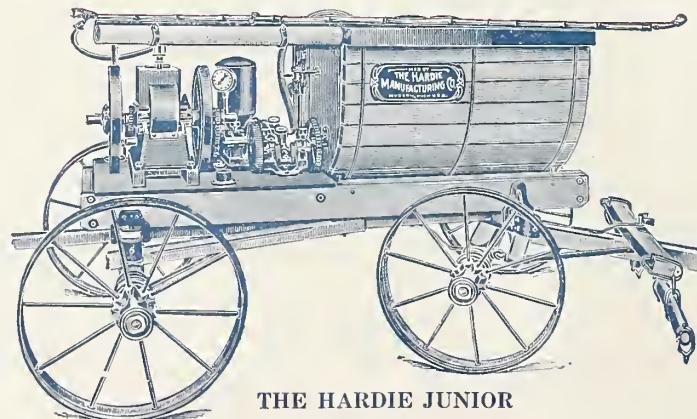
**SERVICE**—The best in the Northwest. Large stocks of machines and parts in all fruit centers. No delays.

**PUMP**—Triplex, Duplex, Hardie Junior types. Sizes to suit your requirements. Brass plungers and plunger tubes. Doing away with all excess friction and no affected by spraying chemicals, heat or cold. Valves—Bell metal ball valves with heavy, long-lived seats. Pressure regulator—The most reliable regulator, giving you absolute control of the pressure at all times. No load on pump and engine when nozzles are not in use.

**PRICES**—The most spray pump value for your money, and a range of prices within the reach of all.

Over seven thousand fruit growers now own Hardie Power Sprayers. Reduced spraying costs. Increase your production. To do this

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small  
grower

A two-lead  
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